

Town Hall #1: Coastal Steelhead Workshop

Kelly Cunningham
Fish Program Director

James P. Losee
Region 6 Fish Program Manager



Zoom Directions and Etiquette

- All callers will be muted upon entry.
- You can type a question through the Q&A function or ask a question by “raising your hand.” If you’re calling in you can raise a hand by dialing *9 on your phone, or if you're calling from a computer, you can find the hand icon at the bottom of your screen.
- When you are called on for a question or comment, we encourage you to speak up and provide comments live. To speak you will need to unmute yourself by using the mute button on your computer or mobile device or enter *6 if you’re calling from a land line.
- If you have a technical issue during the webinar, please drop us a note in the Q&A and we will help you through it.
- Be respectful of others
 - Mute phone or line
 - Be tough on issues and questions, not on people or organizations
 - No personal attacks, insults or threats
 - Listen and assume positive intentions from those speaking.
 - Speak and act professionally – no offensive, disrespectful, or derogatory language, including profanity
 - Allow for a balance of speaking time – limit length and number of times to speak on each topic
- Share questions or comments in written format online at **wdfw.wa.gov/coastal-steelhead**



2021/22 Pre-season schedule

- Mid July: Survey data exchange with tribal comanagers
- **July 28th Town Hall #1:** Coastal Steelhead Town Hall and Workshop
- Mid August: Spawning Escapement Estimates Finalized
- Early September: Exchange pre-season forecasts with Tribal Co-Managers
- Early October: Pre-season Forecasts Agreement with Tribal Co-Managers
- Mid October: Comanager policy meetings to develop Management Plans
- **October Town Hall #2:** Final escapements and preliminary forecasts
- **November Town Hall #3:** Final pre-season planning
- Mid November: Finalize Management Plans with tribal comanagers
- **November 19:** Briefing of Fish and Wildlife Commission
- **Late November Town Hall #4:** Communicate Director's decision on agreed to fishing plans
- December 1: Announce winter fishing rules



Agenda

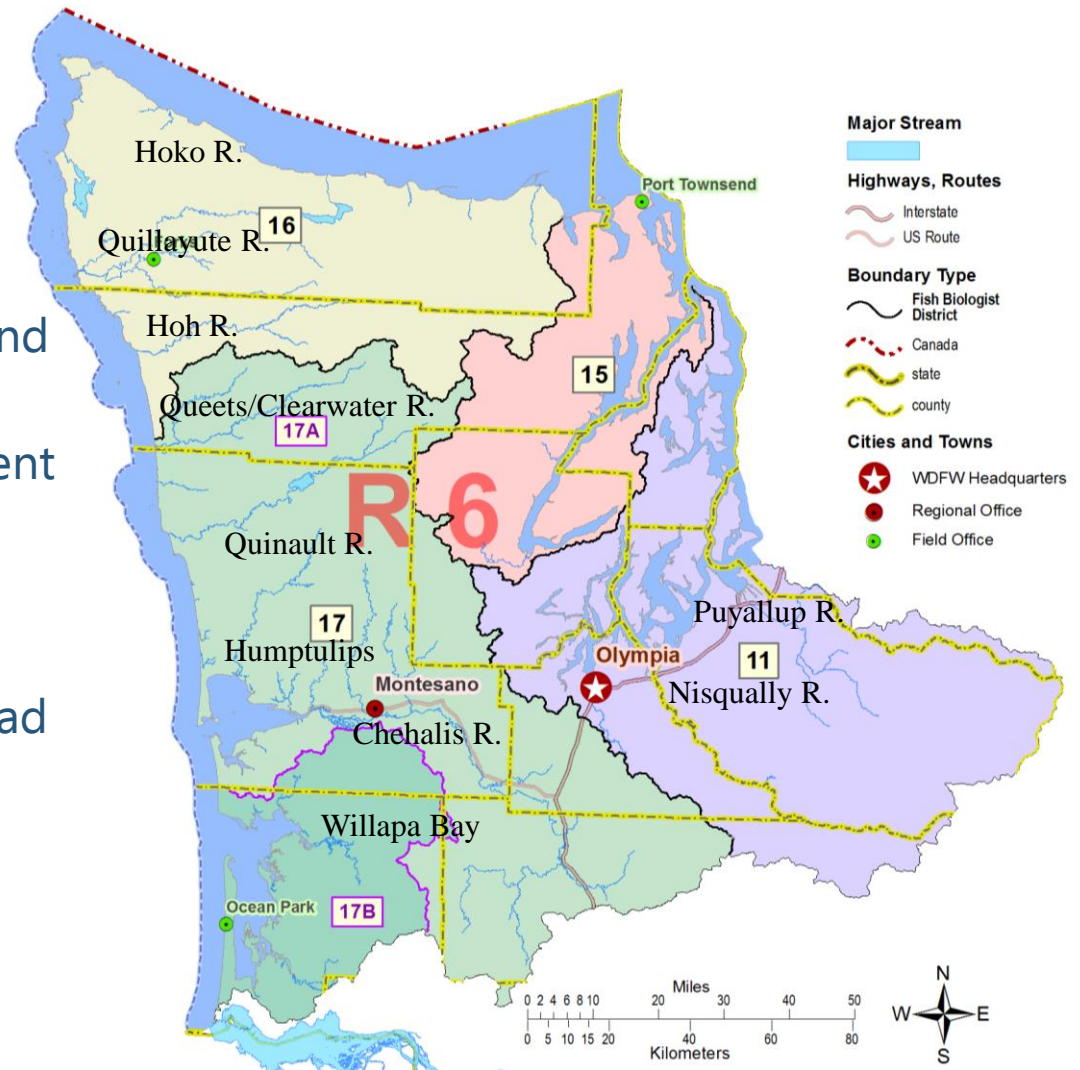
Steelhead Management Background

Steelhead Biology/Stock Assessment

Trends and Goals

Review of 2020-21 Winter Steelhead Season

Regulation Options for 2021-22



Agenda

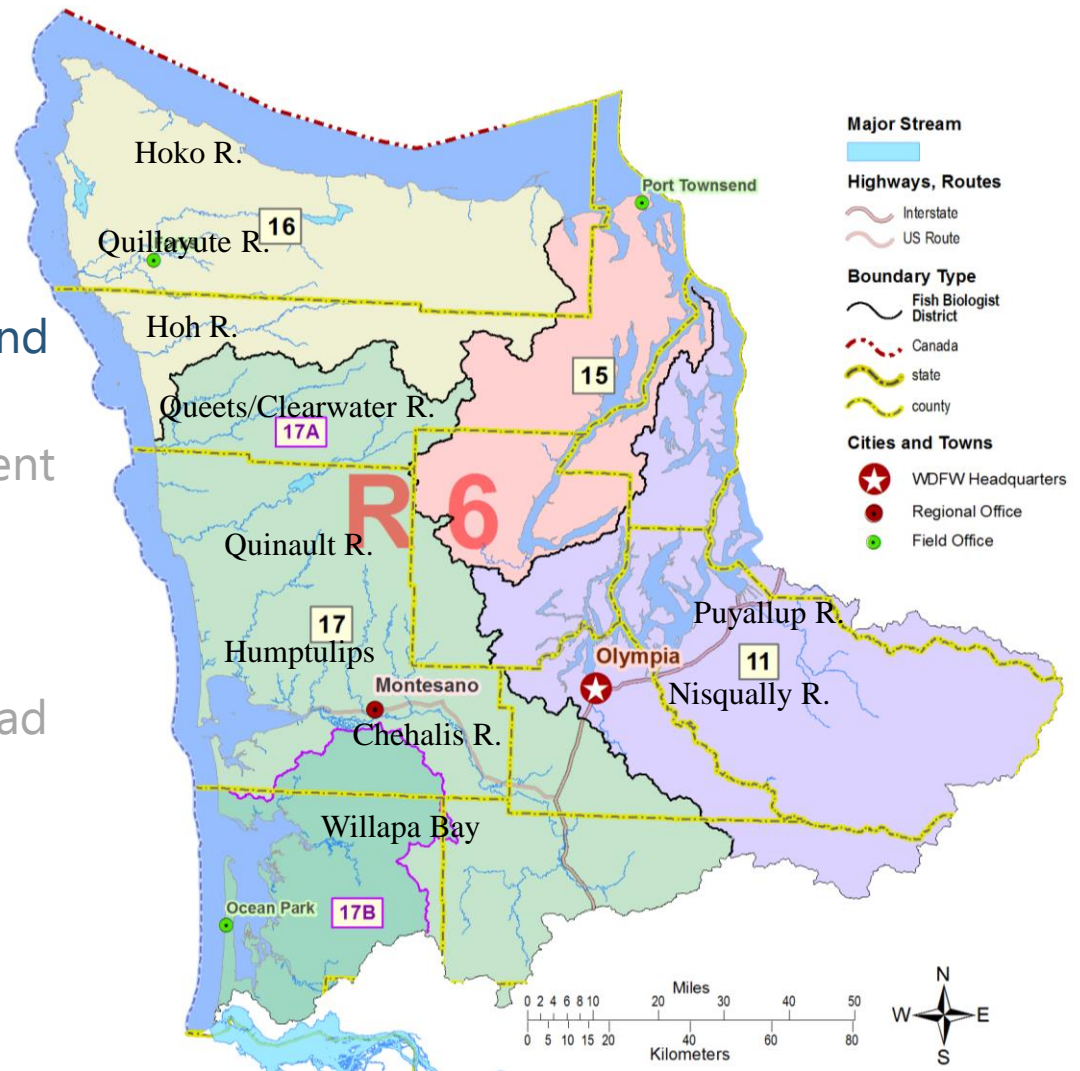
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Steelhead Management-Key Terms

Wild steelhead-Steelhead that were produced in the natural environment.

Hatchery steelhead-Steelhead that were produced in a hatchery.

Run- A group of anadromous fish on its return migration, identified by species, race and water of origin.

Escapement-Number of steelhead surviving to the spawning grounds or hatchery.

Redd-Spawning nest.

Runsize-Number of steelhead returning to the freshwater. Escapement + Harvest.

Survival-Number of steelhead produced by each parent spawner. Recruit per spawner.

Forecast-Predicted number of adult steelhead returning in future years.

Integrated hatcheries-Genetically integrated with natural population.

Segregated hatcheries-Genetically segregated from natural population.



Steelhead Management Plan

Policy guidance from **Statewide Steelhead Management Plan**. Provide a framework of policies, strategies and actions that will lead to achievement of goals. Goals include restore and maintain:

- **Abundance**
- **Productivity**
- **Distribution**
- **Diversity**



Washington Department of Fish and Wildlife

Statewide Steelhead Management Plan:

Statewide Policies, Strategies, and Actions

February 29, 2008



Steelhead Management Plan

Policy guidance from **Statewide Steelhead Management Plan**. Provide a framework of policies, strategies and actions that will lead to achievement of goals. Goals include restore and maintain:

- **Abundance**
- **Productivity**
- **Distribution**
- **Diversity**



Washington Department of Fish and Wildlife

Statewide Steelhead Management Plan:

Statewide Policies, Strategies, and Actions

Specific Abundance Guidelines:

Runsize Greater than escapement goal: Assure escapement goals are met.

Runsize less than escapement goal: Minimize mortality to wildstock(s); in no case exceed a 10% impact from all fisheries.



Steelhead Management- Considerations

- Limited in-season tools
- Effort shift uncertainty
- Recent history of over forecasting
- Tribal co-management
- National Park
- Escapement goals
- Run Timing



Agenda

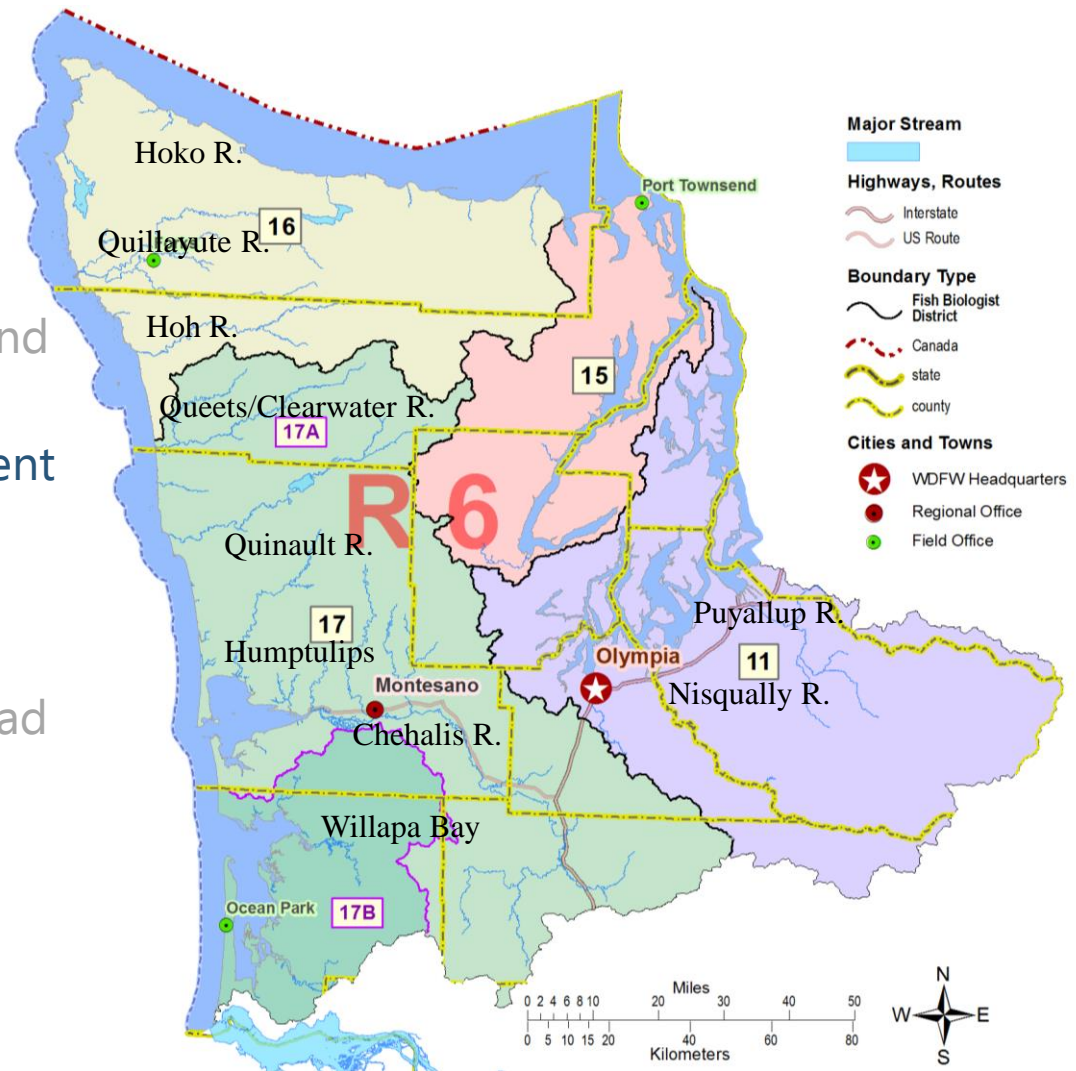
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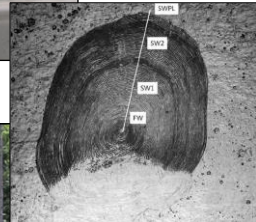


Biology/Stock Assessment

Cederholm 1984
Madel and Losee et al. 2017
Ronne et al. 2020

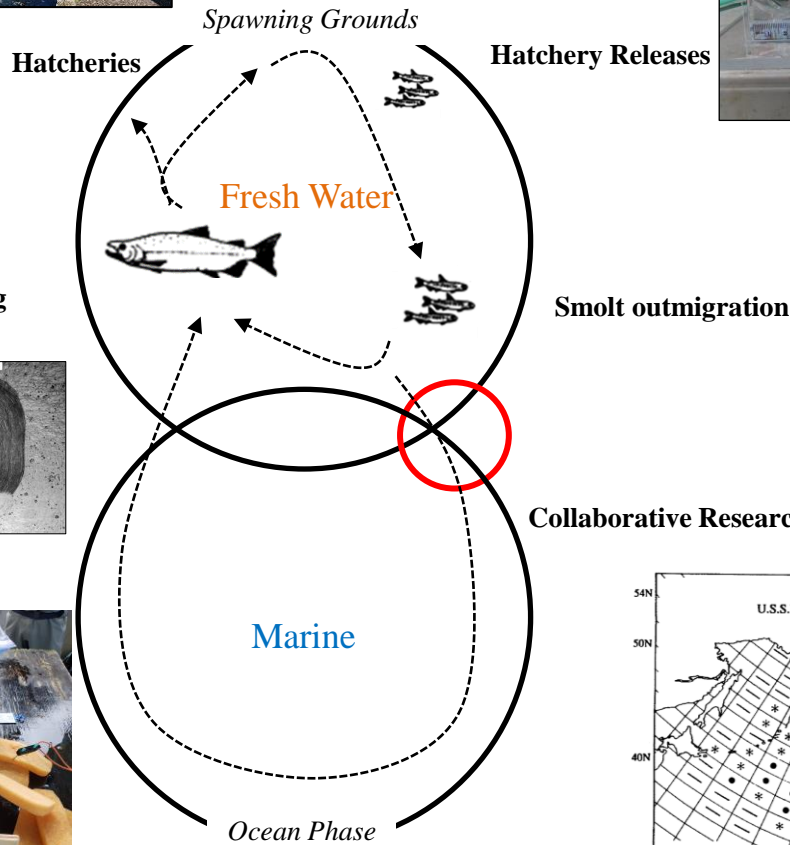


Dauer et al. 2009



Spawning Ground Surveys

Fishery Monitoring

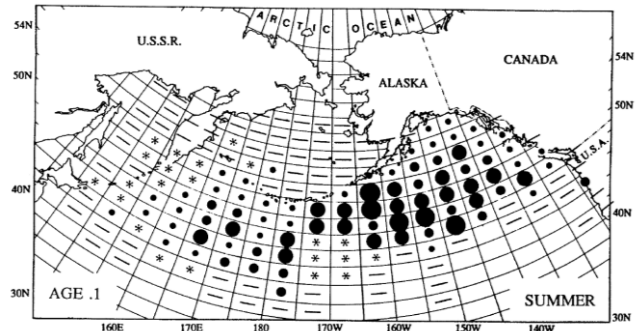


Smolt outmigration

Collaborative Research



West et al. 2019



Light et al. 1989

STEELHEAD Did you fish for Steelhead? ☐ Yes ☐ No

Do Not Record Released Steelhead

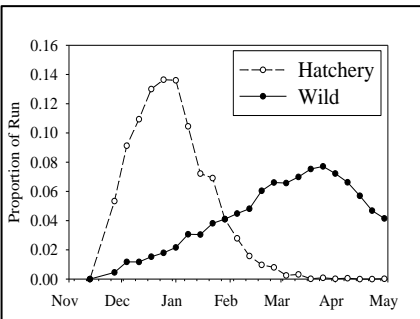
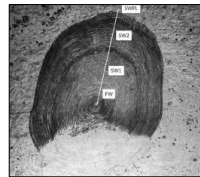
CATCH AREA	NO.	DATE
100	1	1-1-11

A hatchery steelhead kept from the Slough then on March 12 would be entered as above. Release wild steelhead.

Hatchery fish (dorsal or ventral fin clipped and a headscar at the location of the clipped fin)

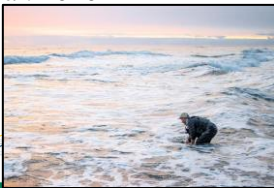
Wild fish (dorsal and ventral fin intact)

Immediately after retaining a steelhead and before fishing again, record catch information in book. Additional Catch Cards are available for hatchery steelhead only.

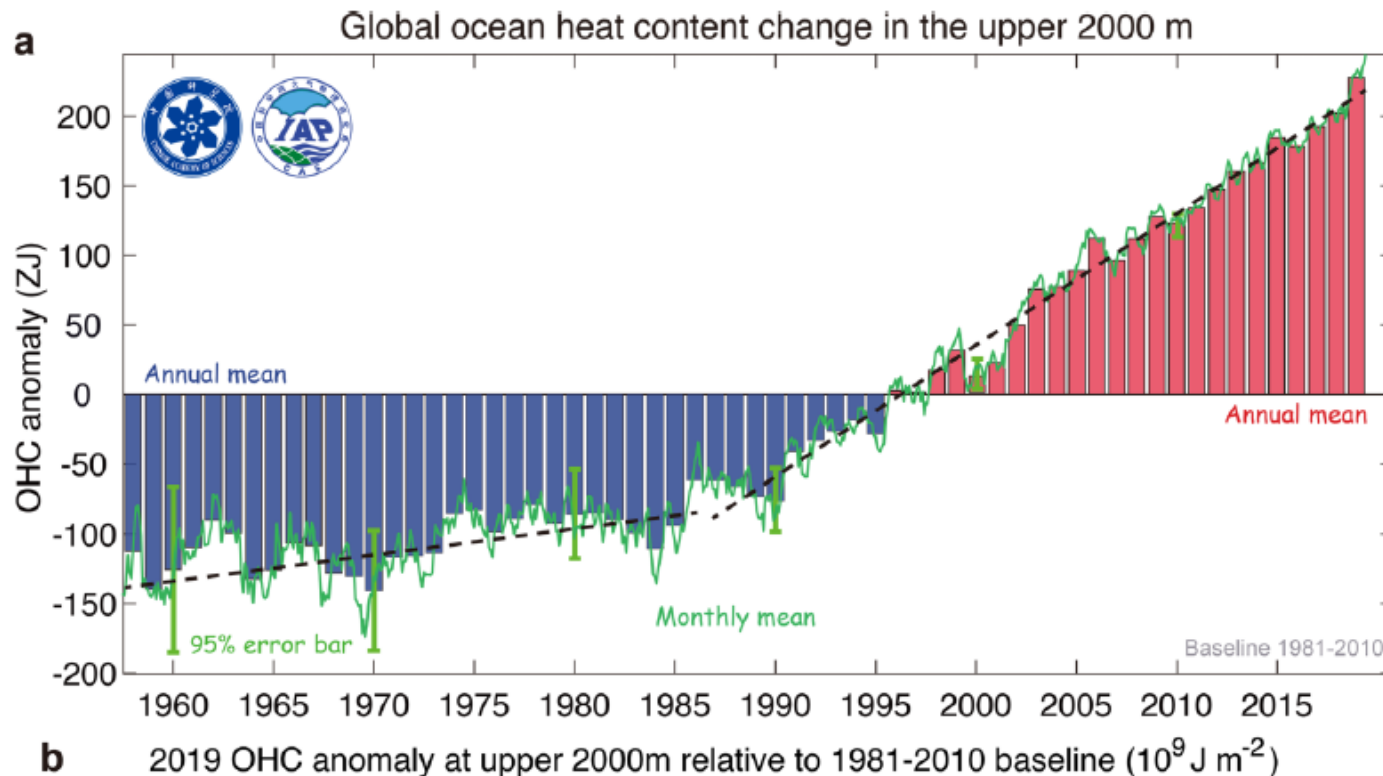


Kendall and Mcmillan et al. 2015

Losee et al. 2020



Steelhead Biology-Ocean Conditions



ADVANCES IN ATMOSPHERIC SCIENCES, VOL. 37, FEBRUARY 2020, 137-142

• News & Views •

Record-Setting Ocean Warmth Continued in 2019

Lijing CHENG^{1,2,11}, John ABRAHAM³, Jiang ZHU^{1,2}, Kevin E. TRENBERTH⁴, John FA-
Tim BOYER⁵, Ricardo LOCARNINI⁶, Bin ZHANG^{2,6}, Fujiang YU⁷, Liying WAN
Xingrong CHEN⁷, Xiangzhou SONG⁸, Yulong LIU⁹, and Michael E. MANN¹⁰

ADVANCES IN ATMOSPHERIC SCIENCES, 2021

• News & Views •

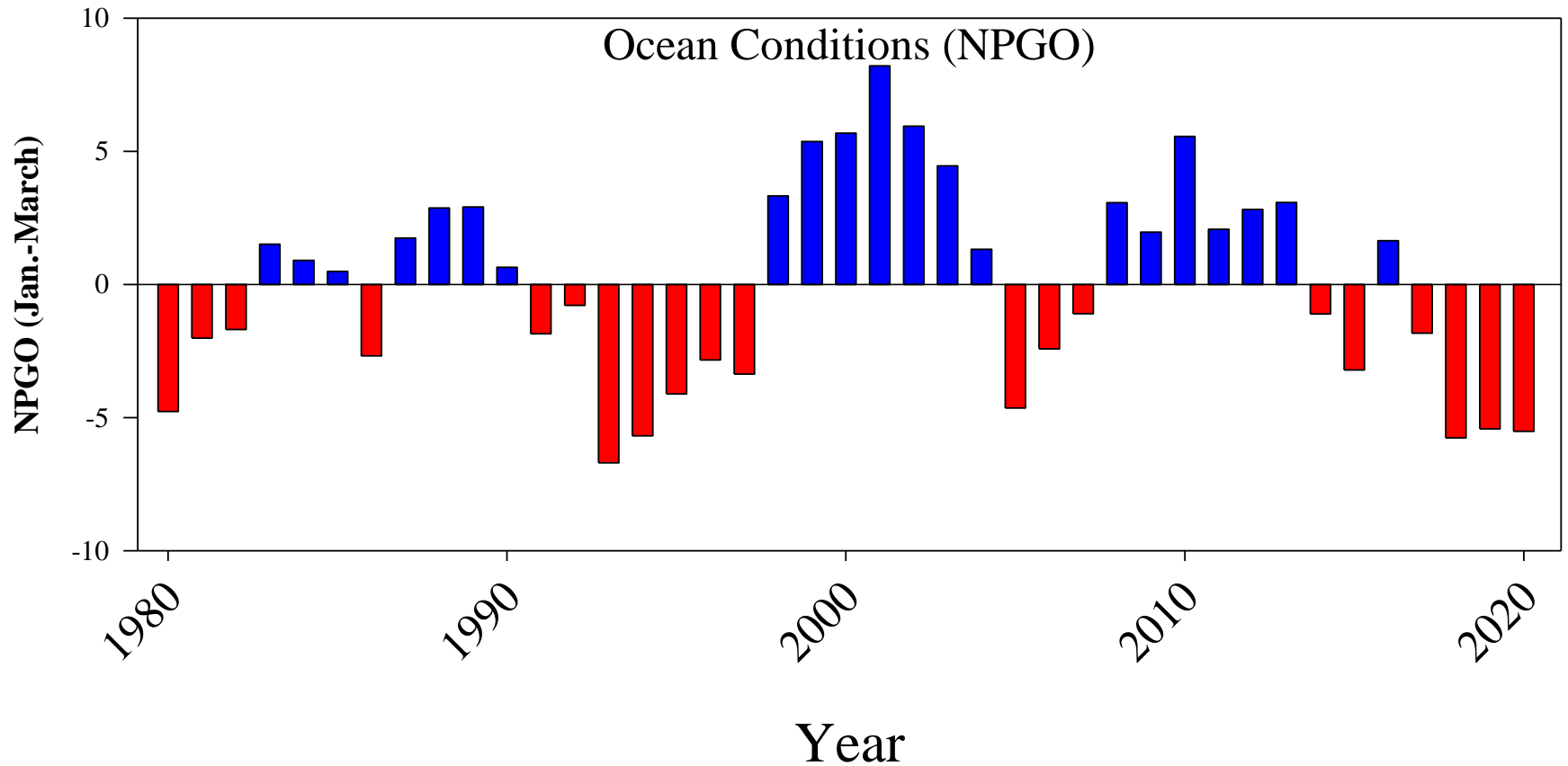
Upper Ocean Temperatures Hit Record High in 2020

Lijing CHENG^{1,2}, John ABRAHAM³, Kevin E. TRENBERTH⁴, John FASULLO⁴, Tim BOYER⁵,
Ricardo LOCARNINI⁶, Bin ZHANG^{2,6}, Fujiang YU⁷, Liying WAN⁷, Xingrong CHEN⁷, Xiangzhou SONG⁸,
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Viktor GOURETSKI^{1,2}, Gengxin CHEN¹³, Alexey MISHONOV^{5,14}, Jim REAGAN^{5,14}, and Jiang ZHU^{1,2}

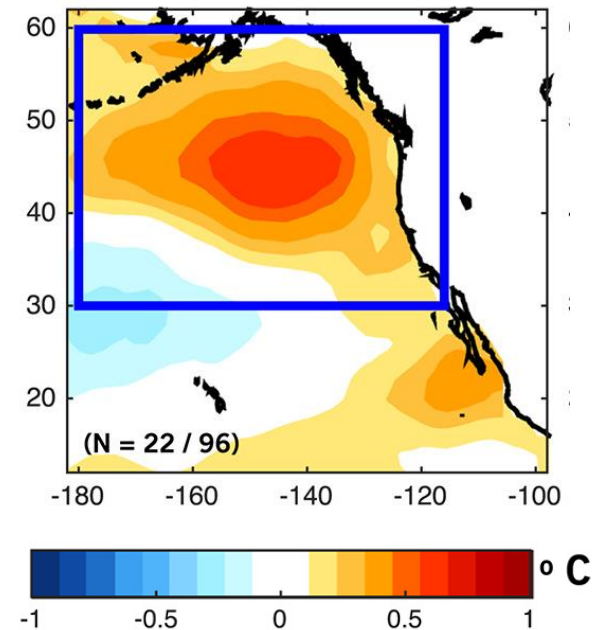
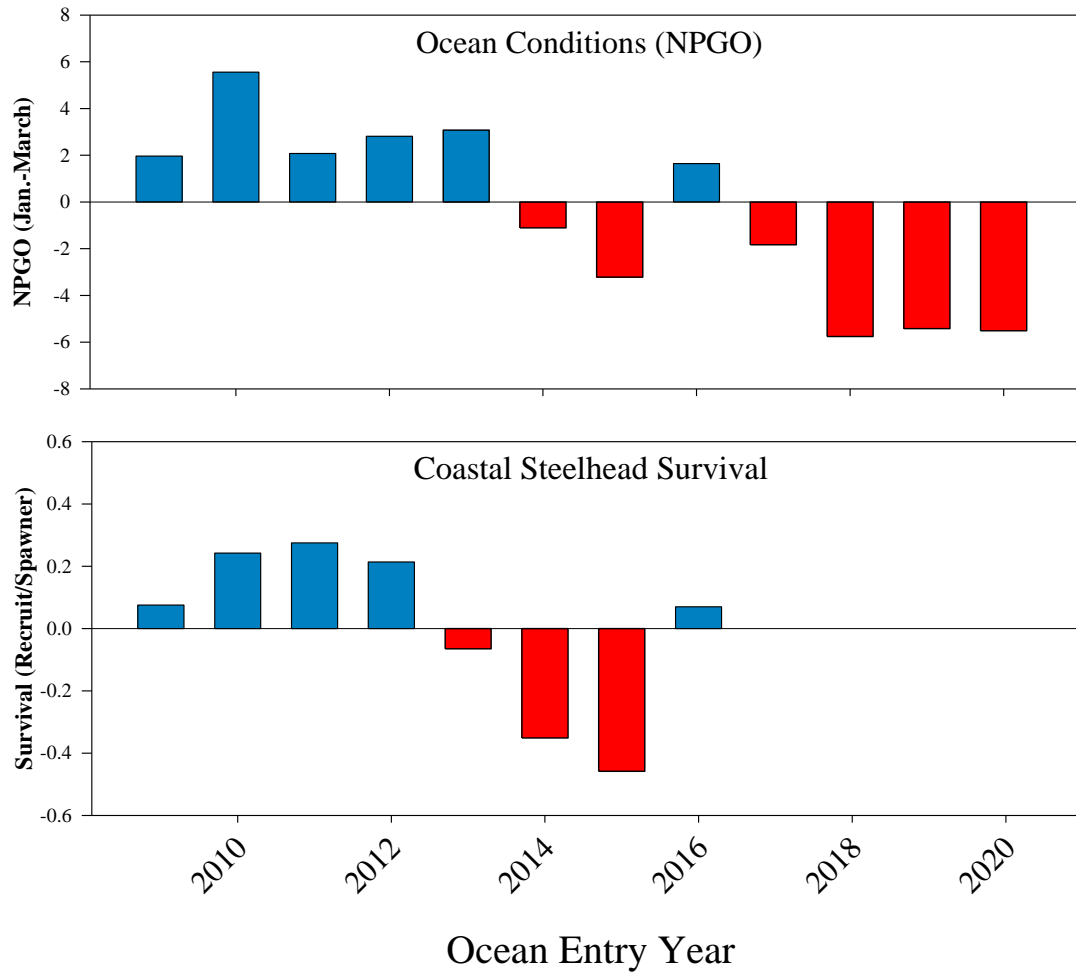
https://www.ncei.noaa.gov/access/global-ocean-heat-content/monthly_analysis.html



Steelhead Biology-Ocean Conditions



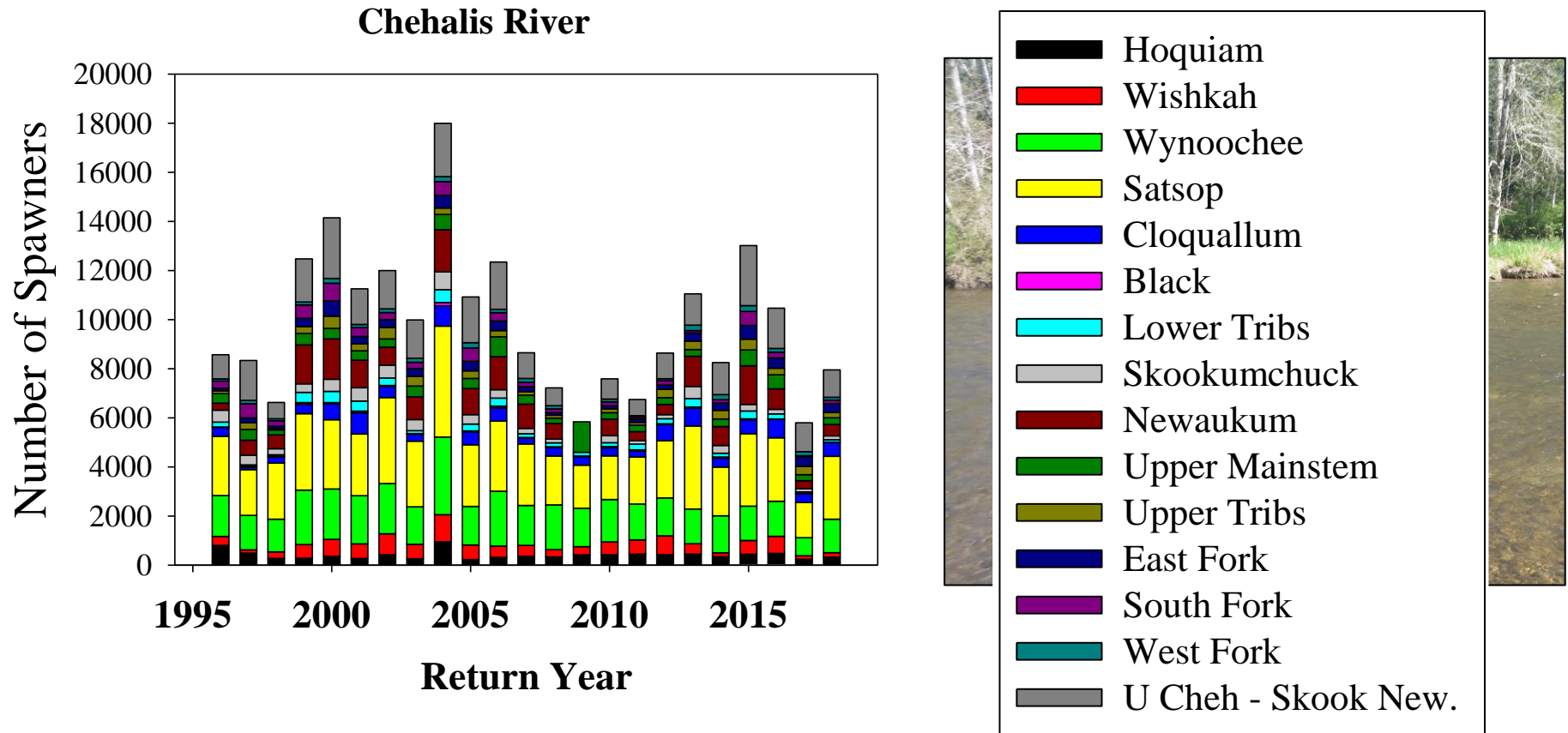
Steelhead Biology-Ocean Conditions



Joh & Lorenzo 2017
Scheuerell et al. 2020



Steelhead Biology-Escapement



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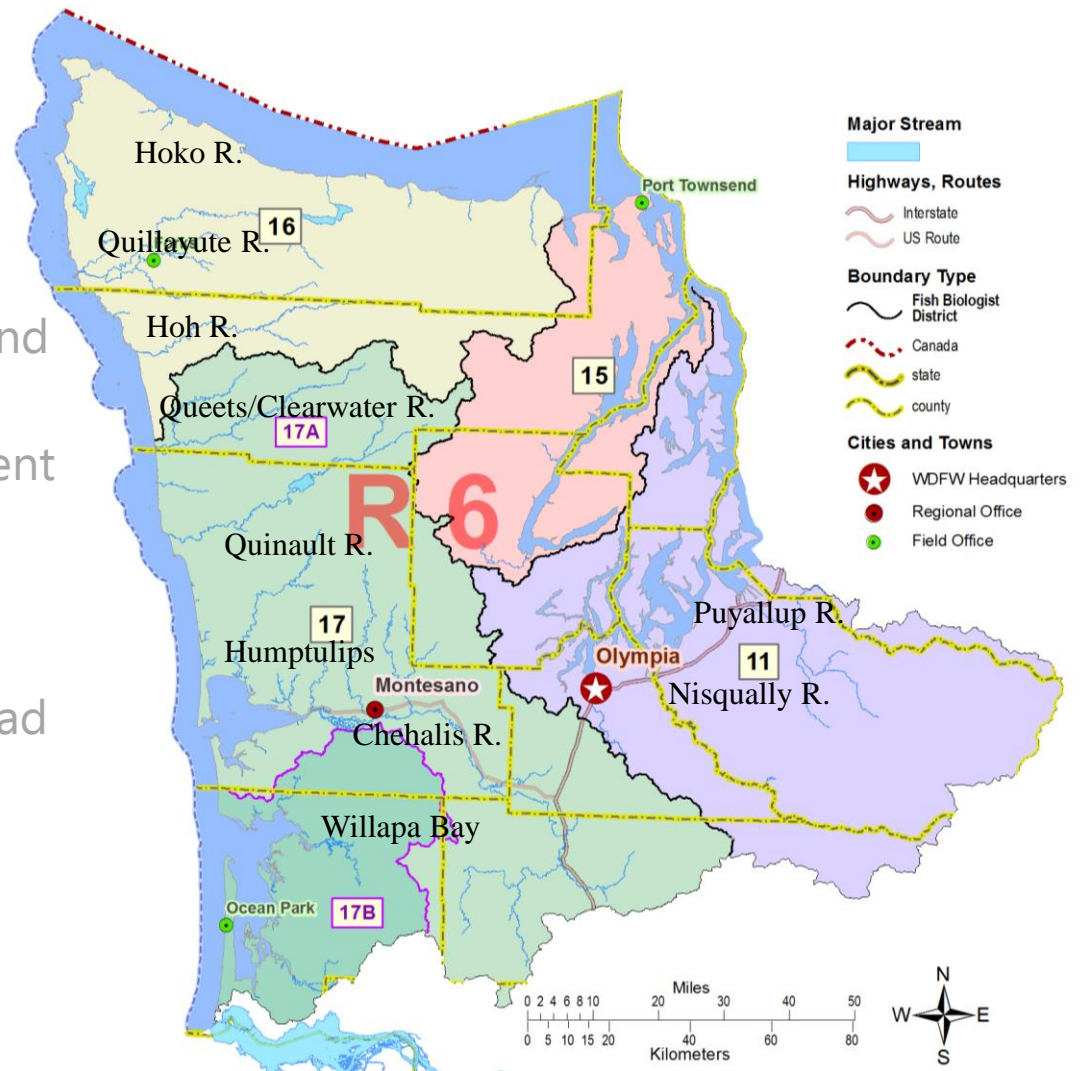
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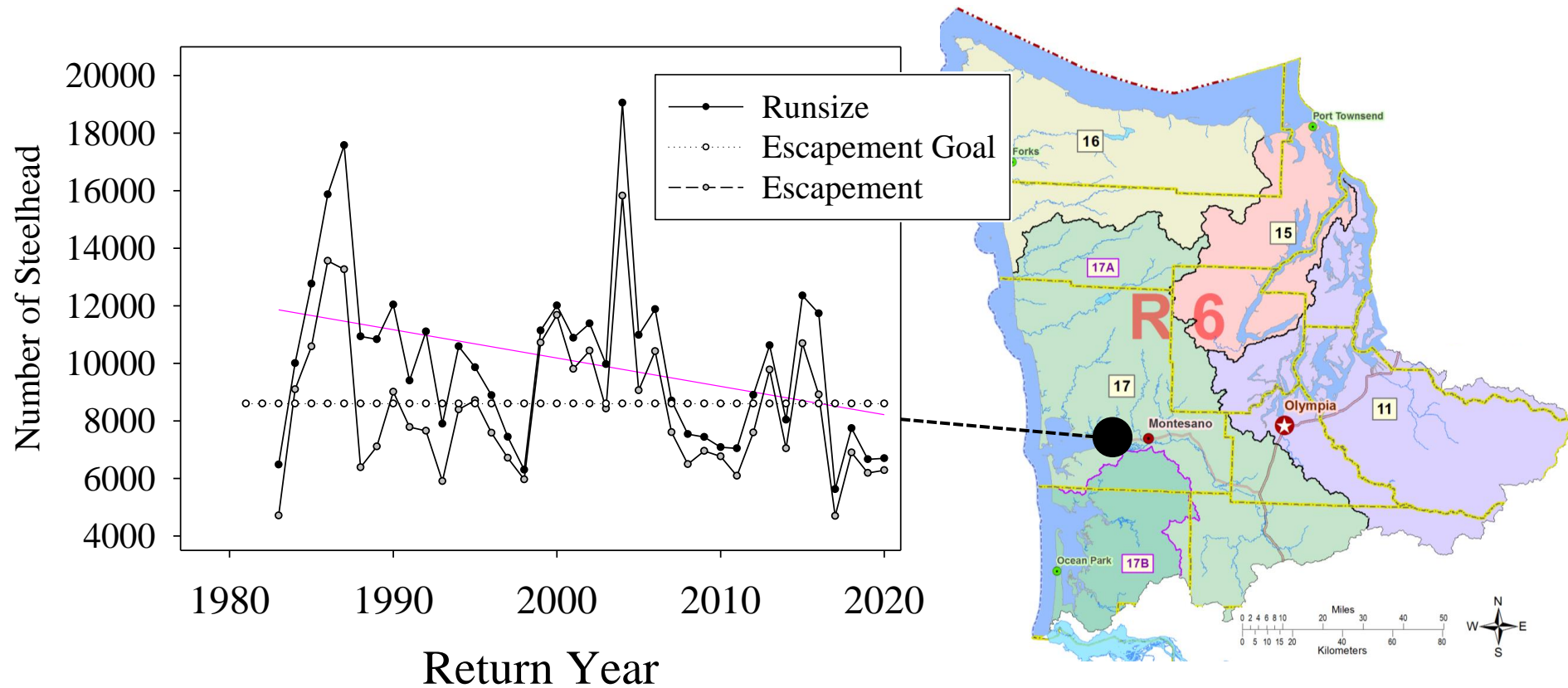
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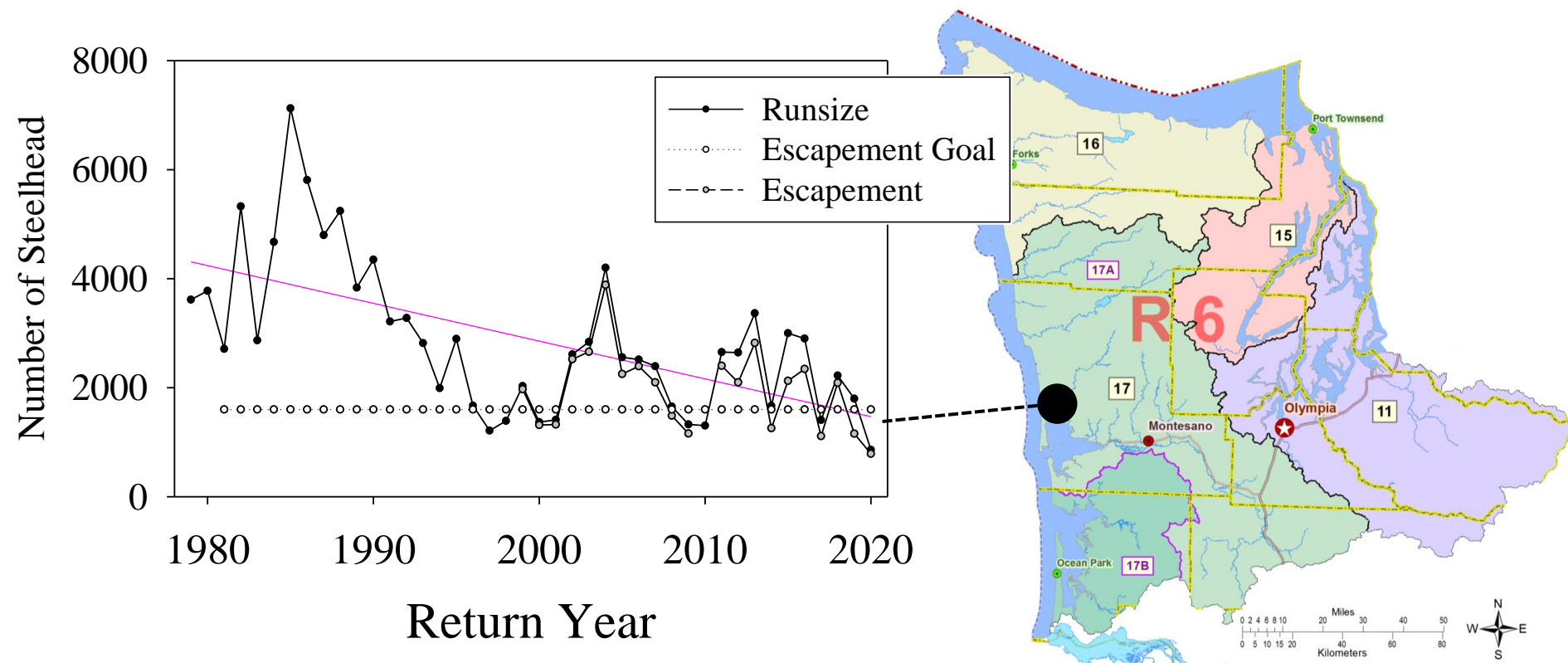
Regulation Options for 2021-22



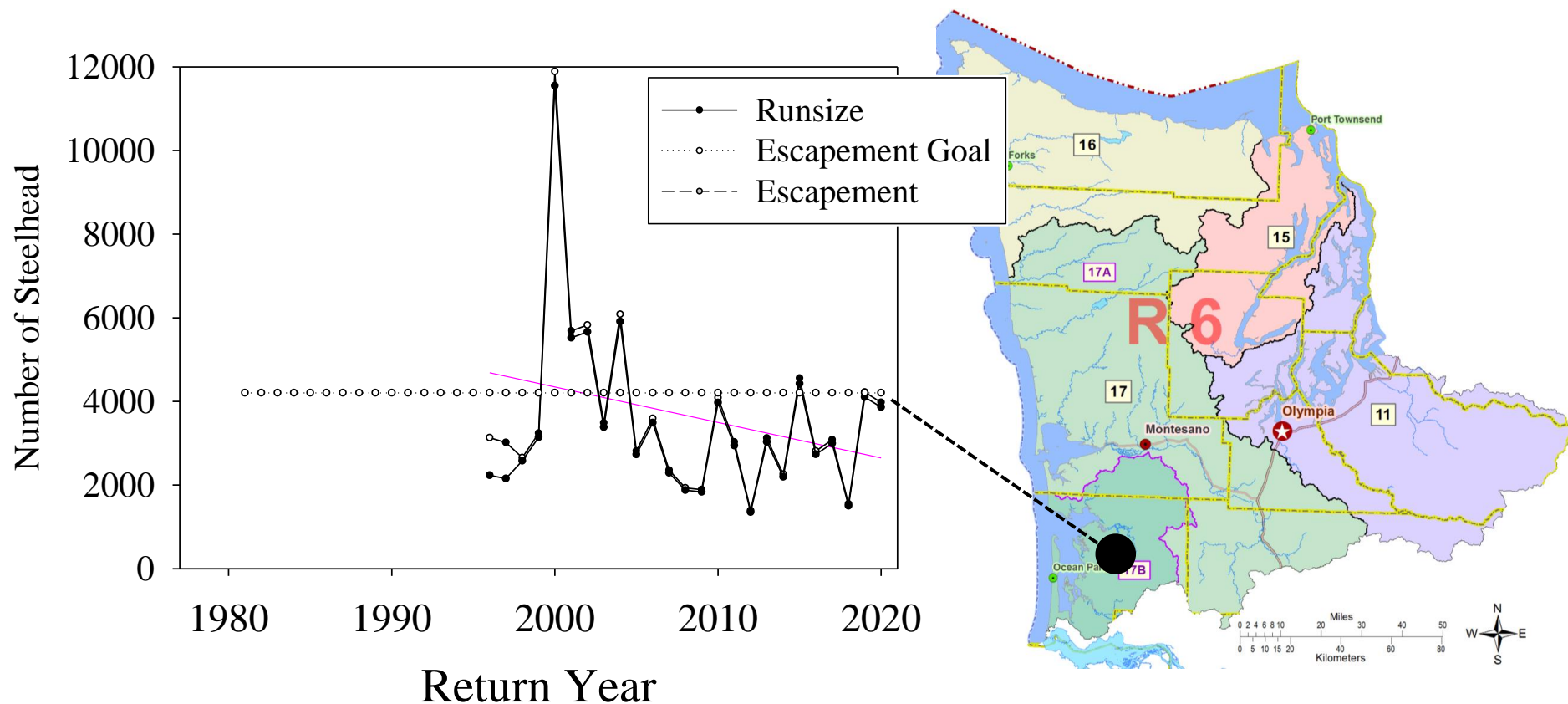
Steelhead Trends- Chehalis R.



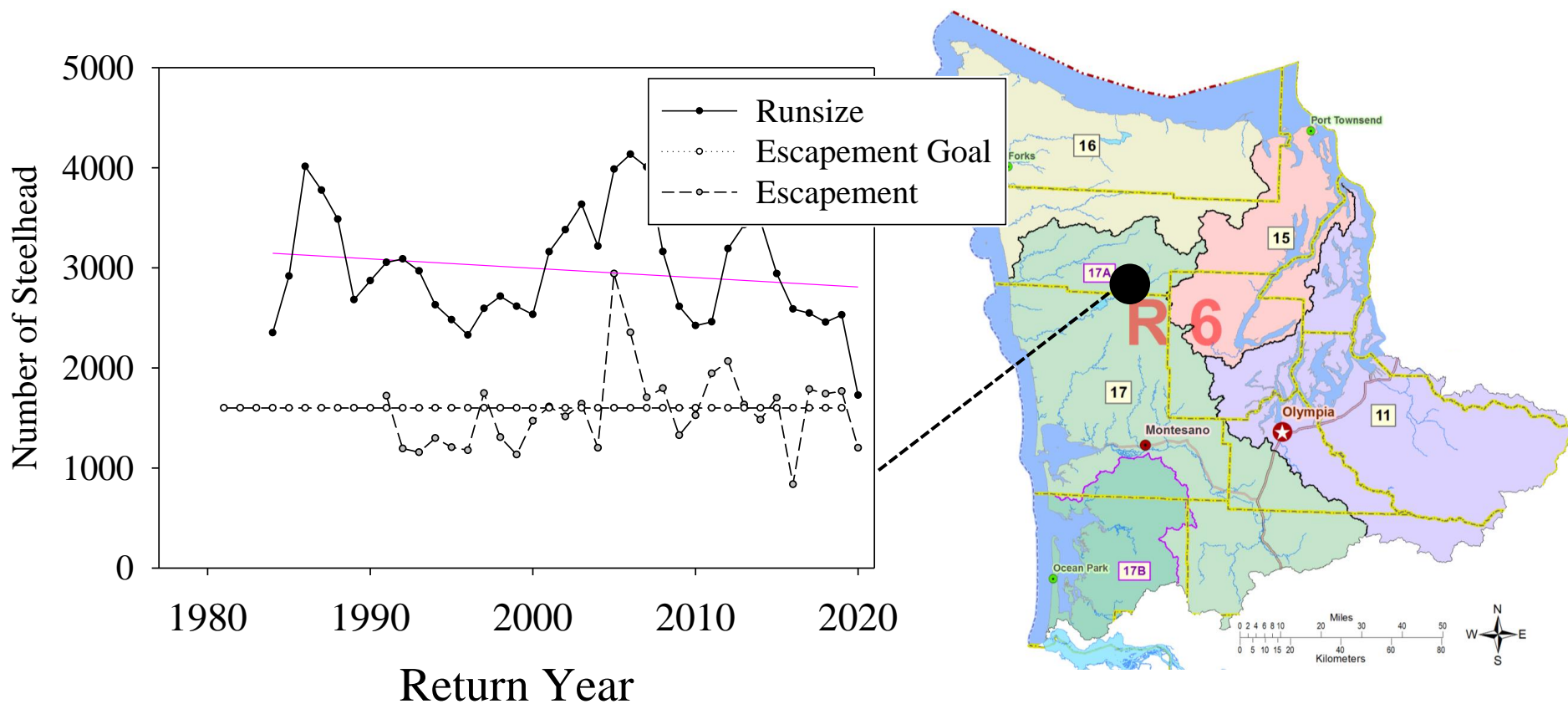
Steelhead Trends- Humptulips R.



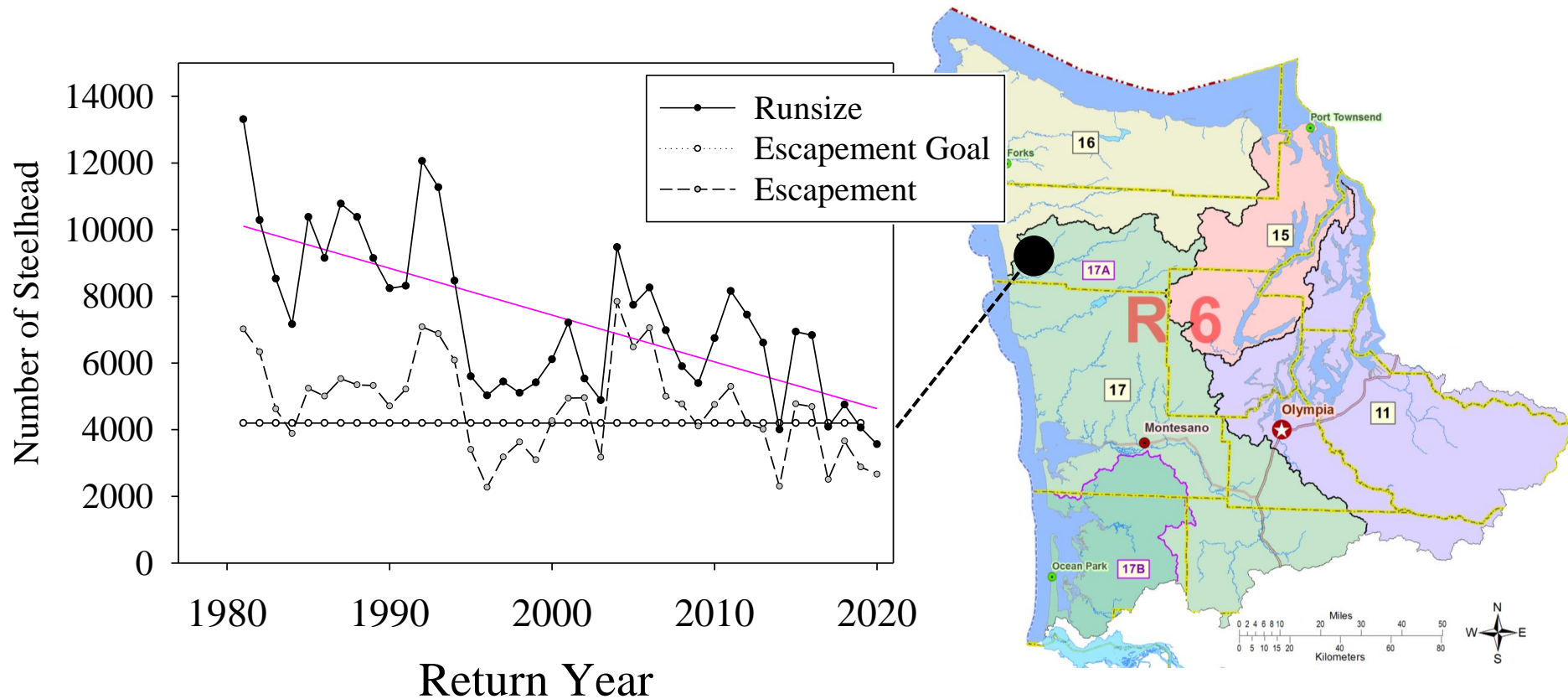
Steelhead Trends- Willapa Bay



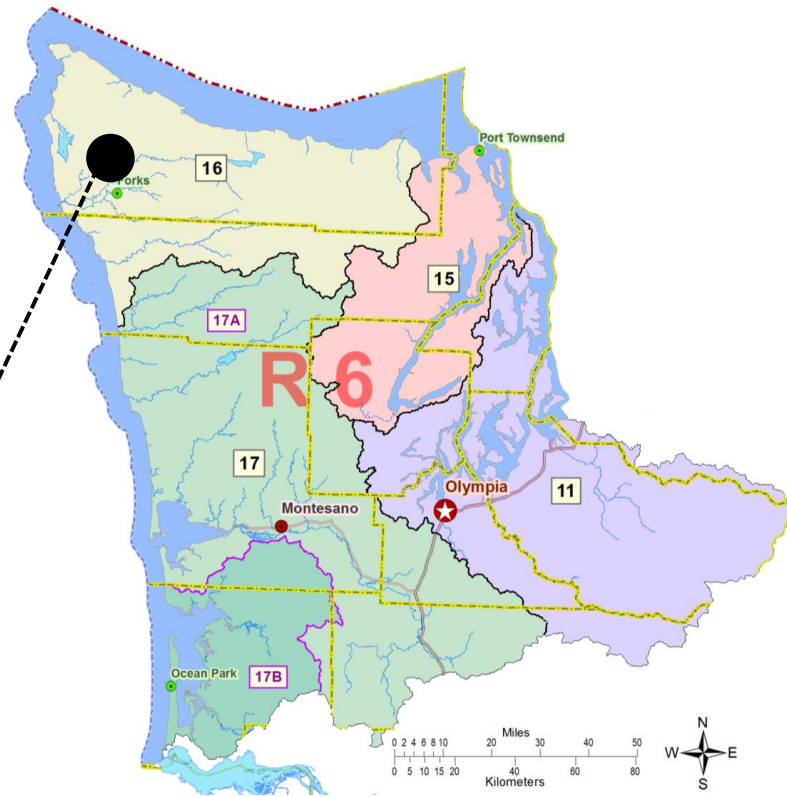
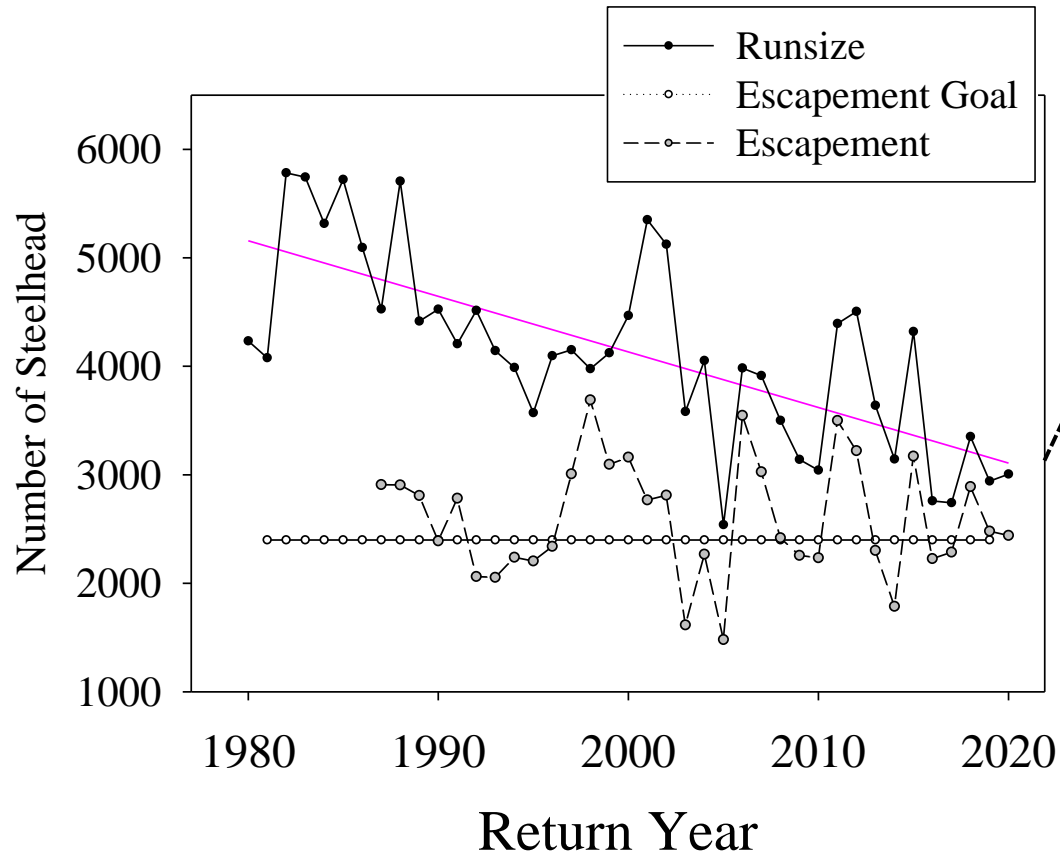
Steelhead Trends- Upper Quinault R.



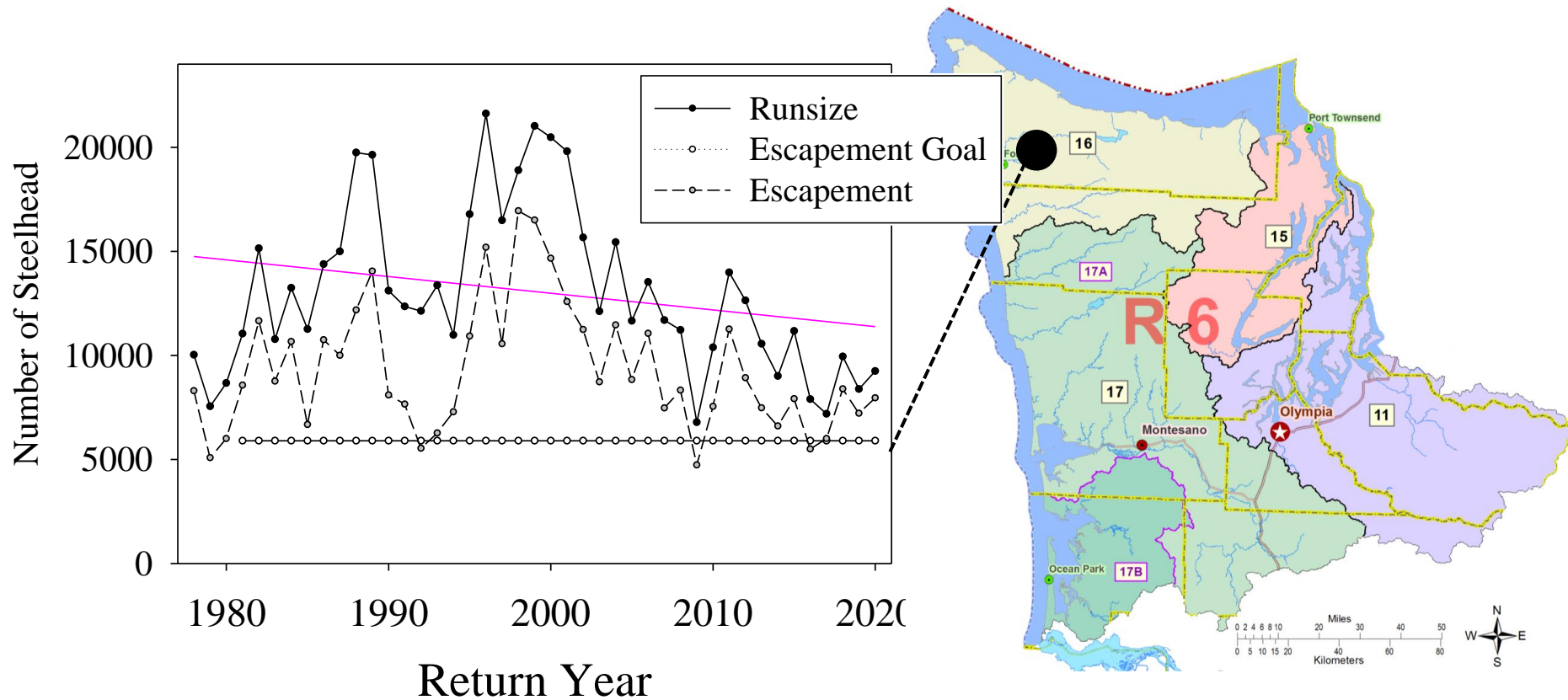
Steelhead Trends- Queets/Clearwater R.



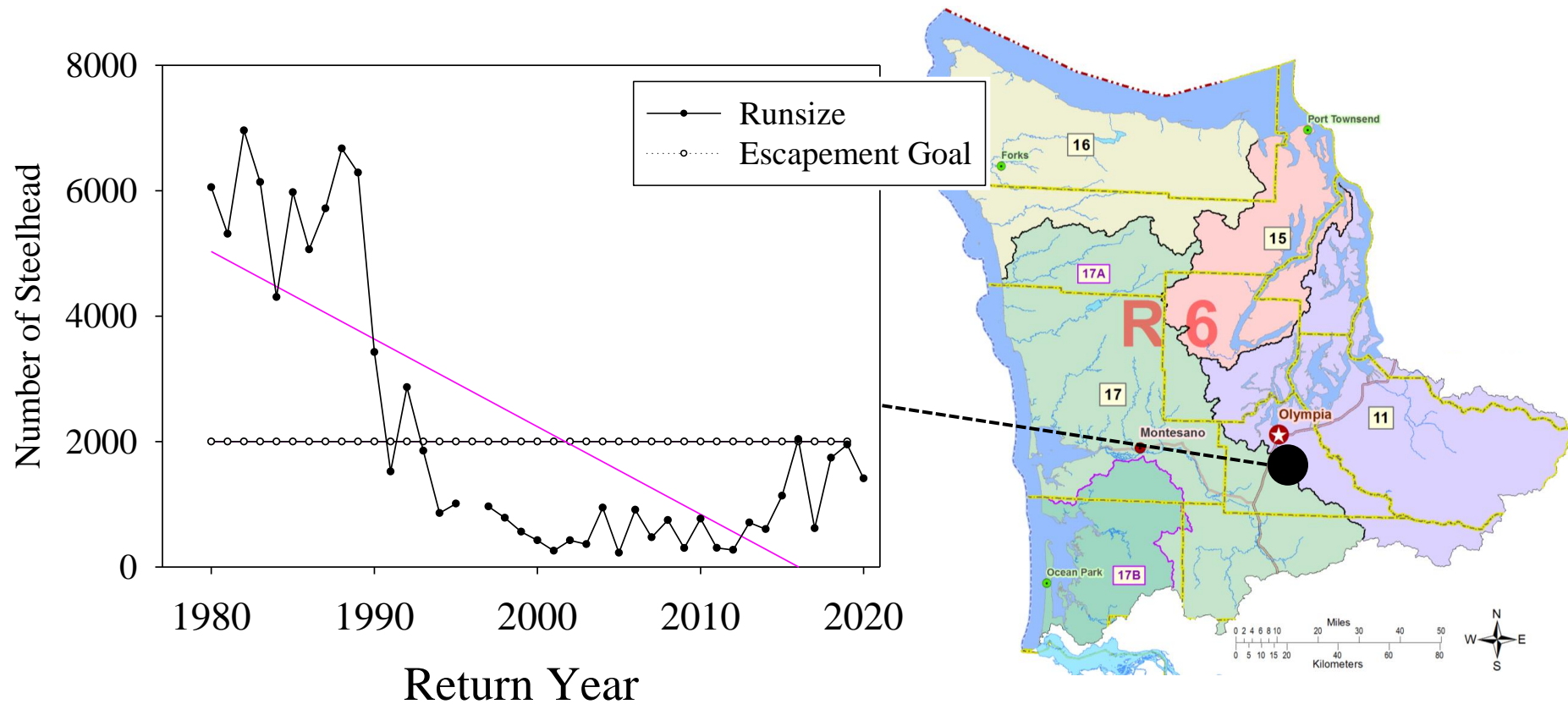
Steelhead Trends- Hoh R.



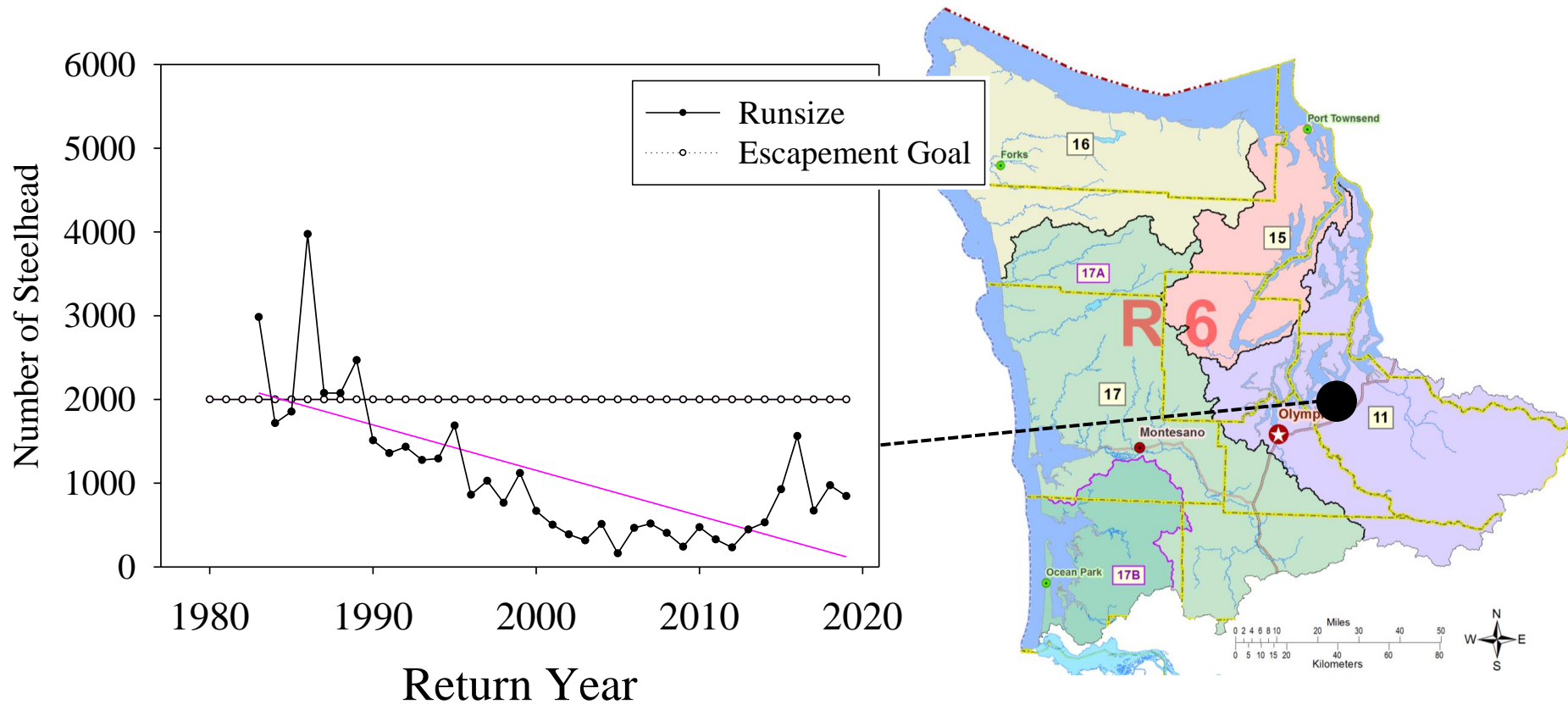
Steelhead Trends- Quillayute R.



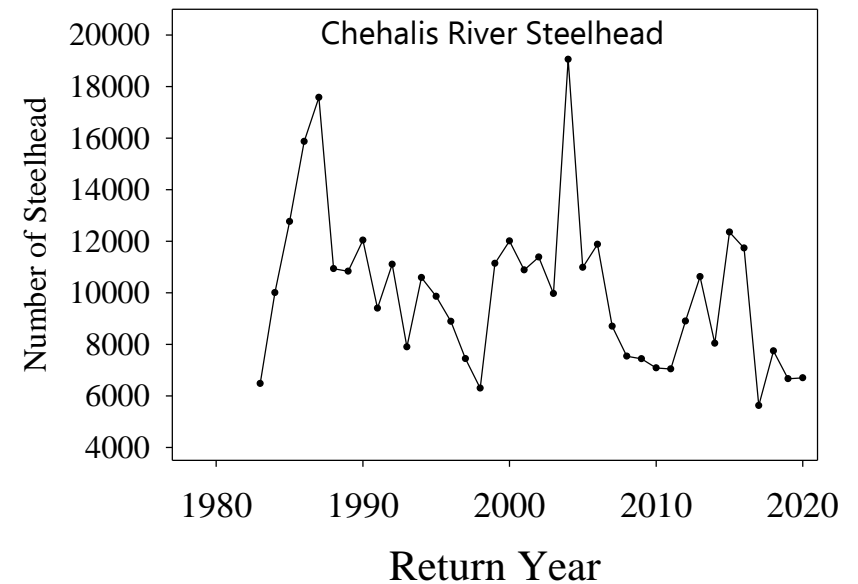
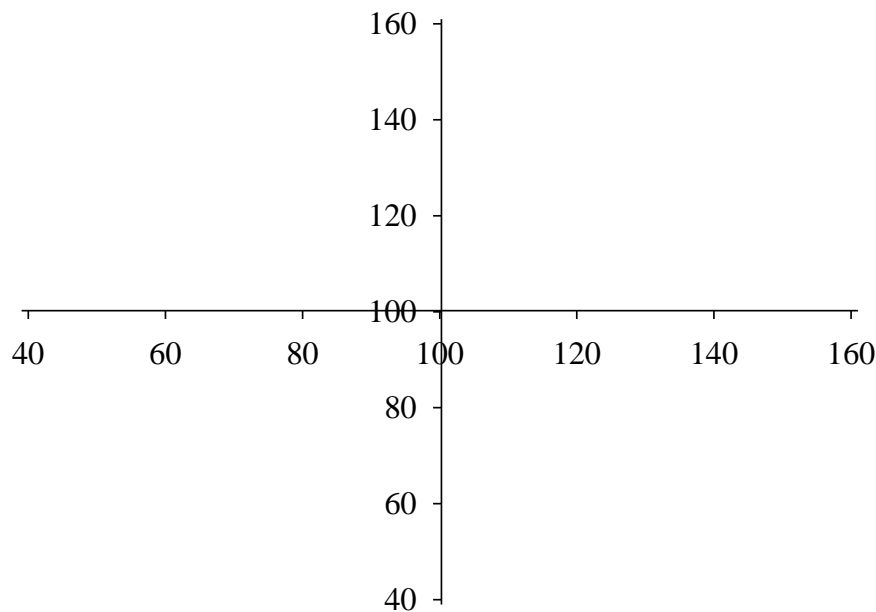
Steelhead Trends-Nisqually R.



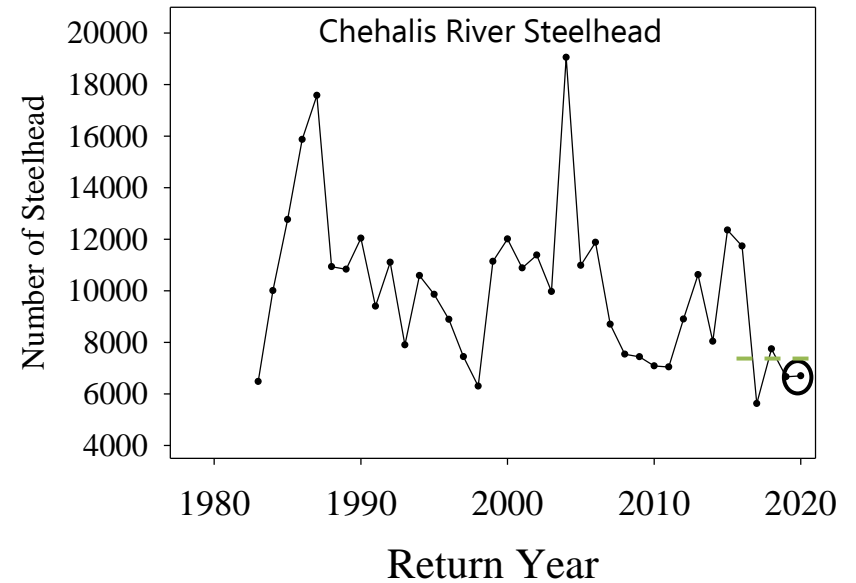
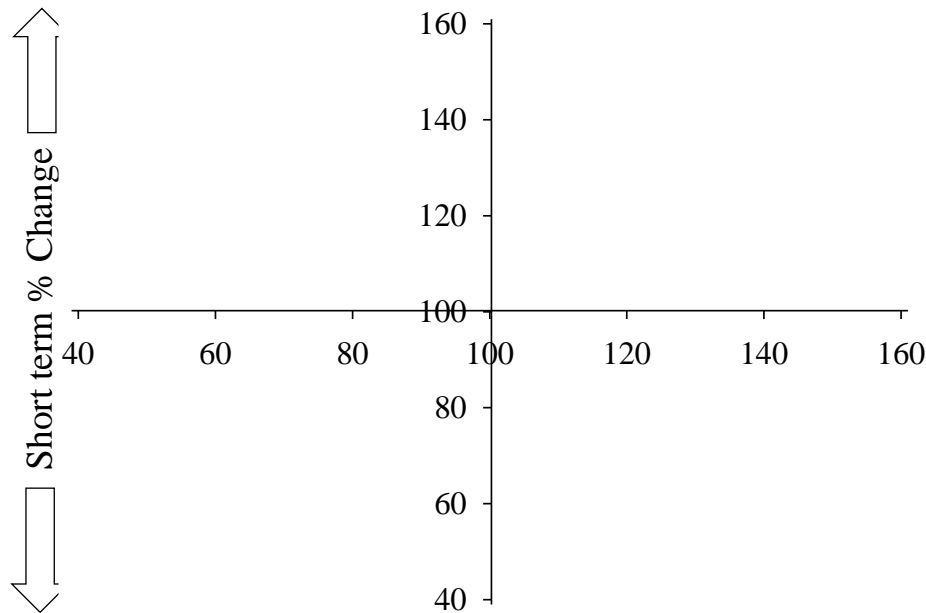
Steelhead Trends-Puyallup R.



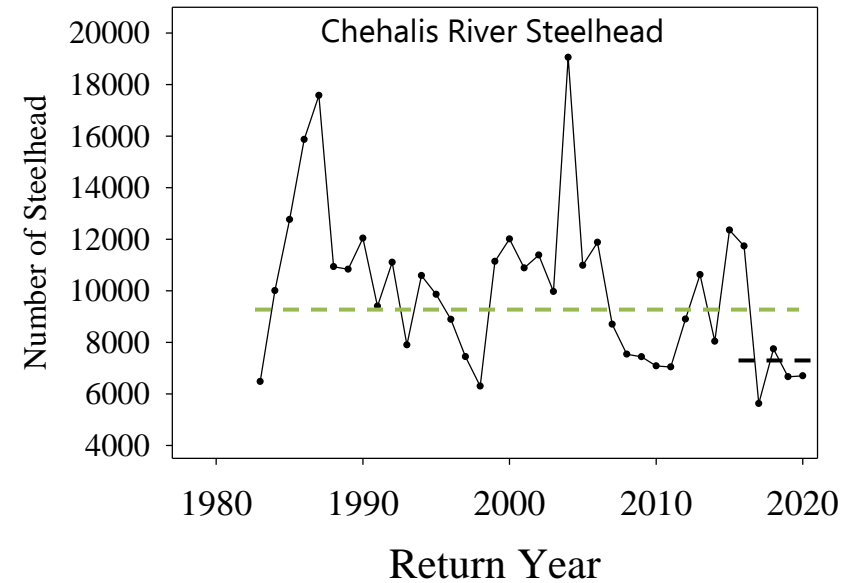
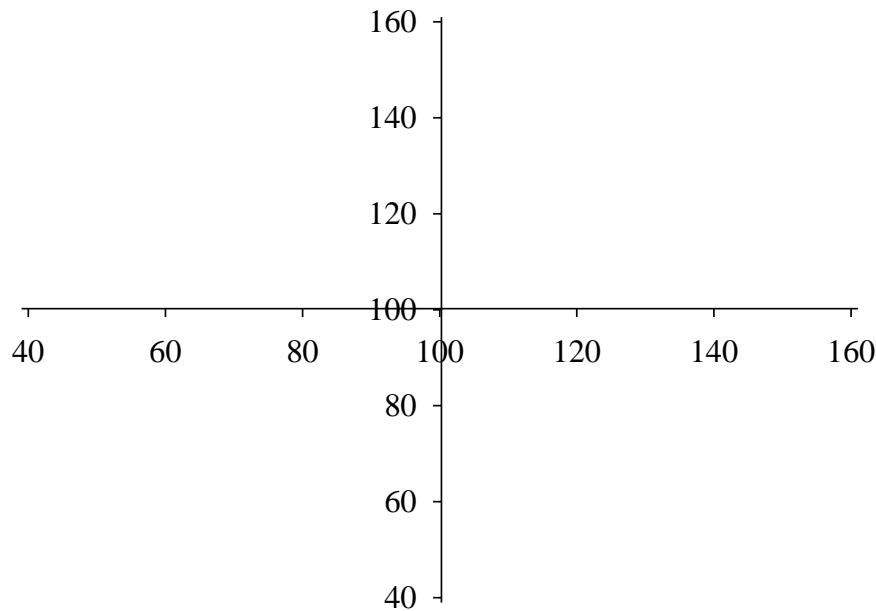
Steelhead Trends-Runsize



Steelhead Trends-Runsize



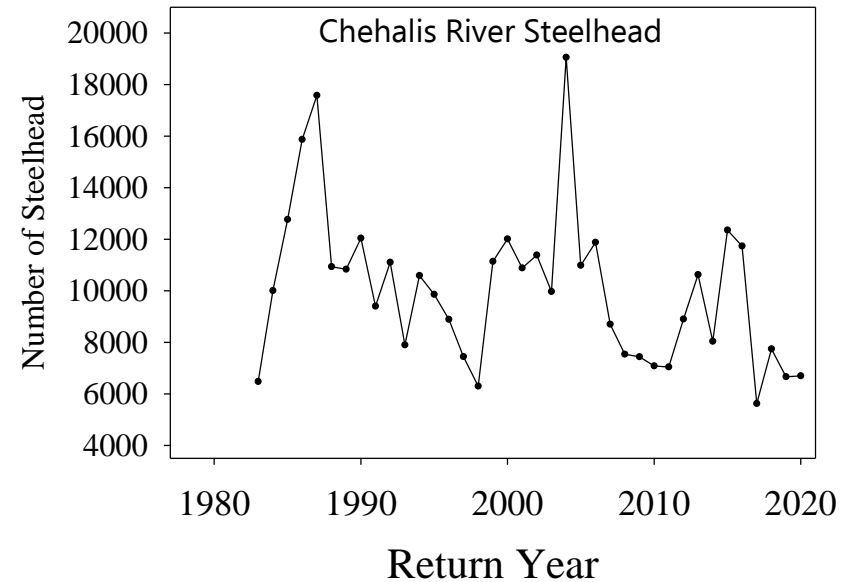
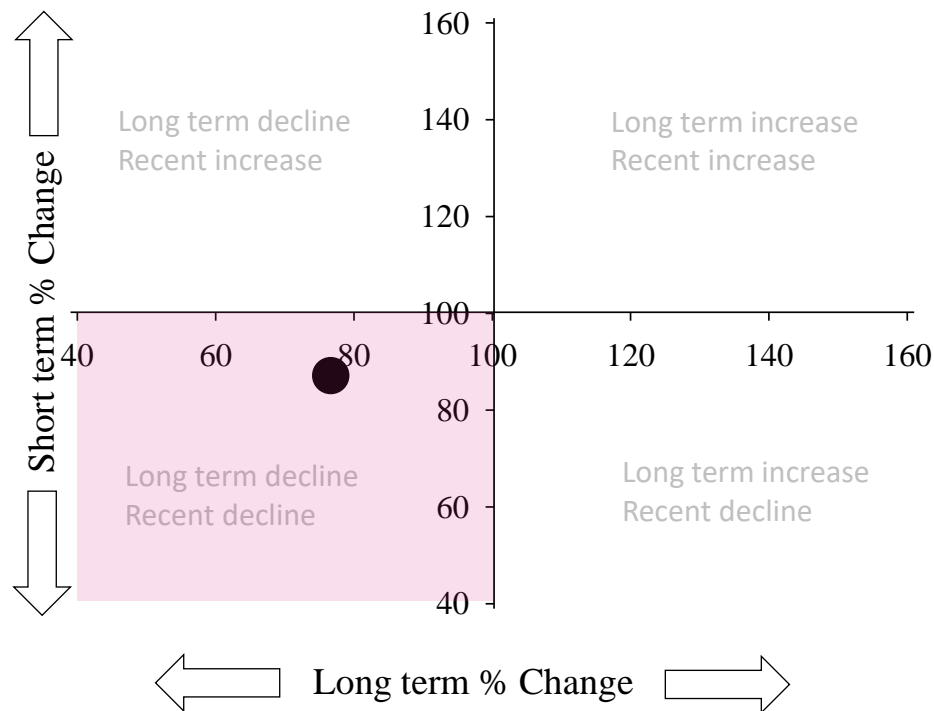
Steelhead Trends-Runsize



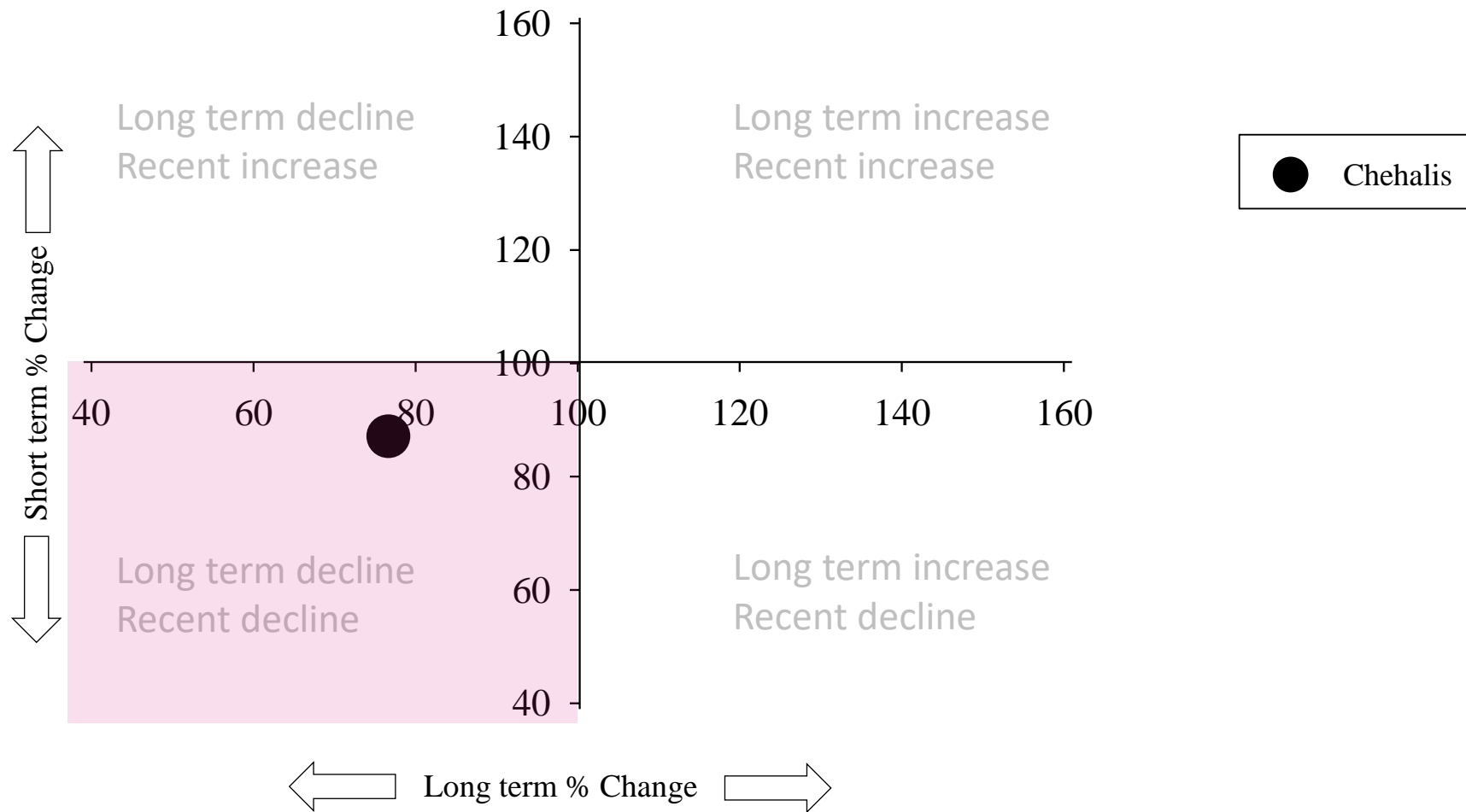
← Long term % Change →



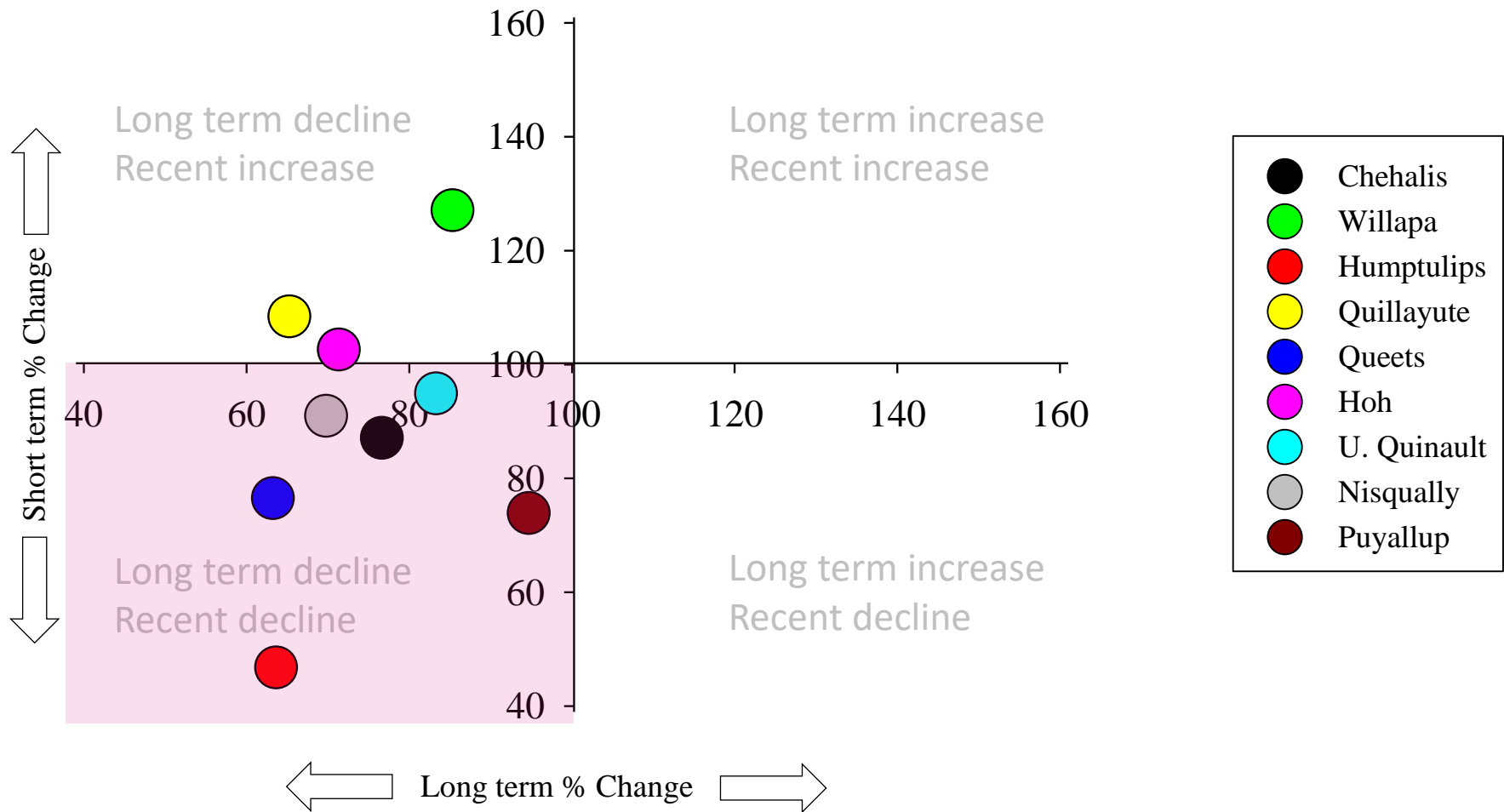
Steelhead Trends-Runsize



Steelhead Trends-Runsize



Steelhead Trends-Runsize



Agenda

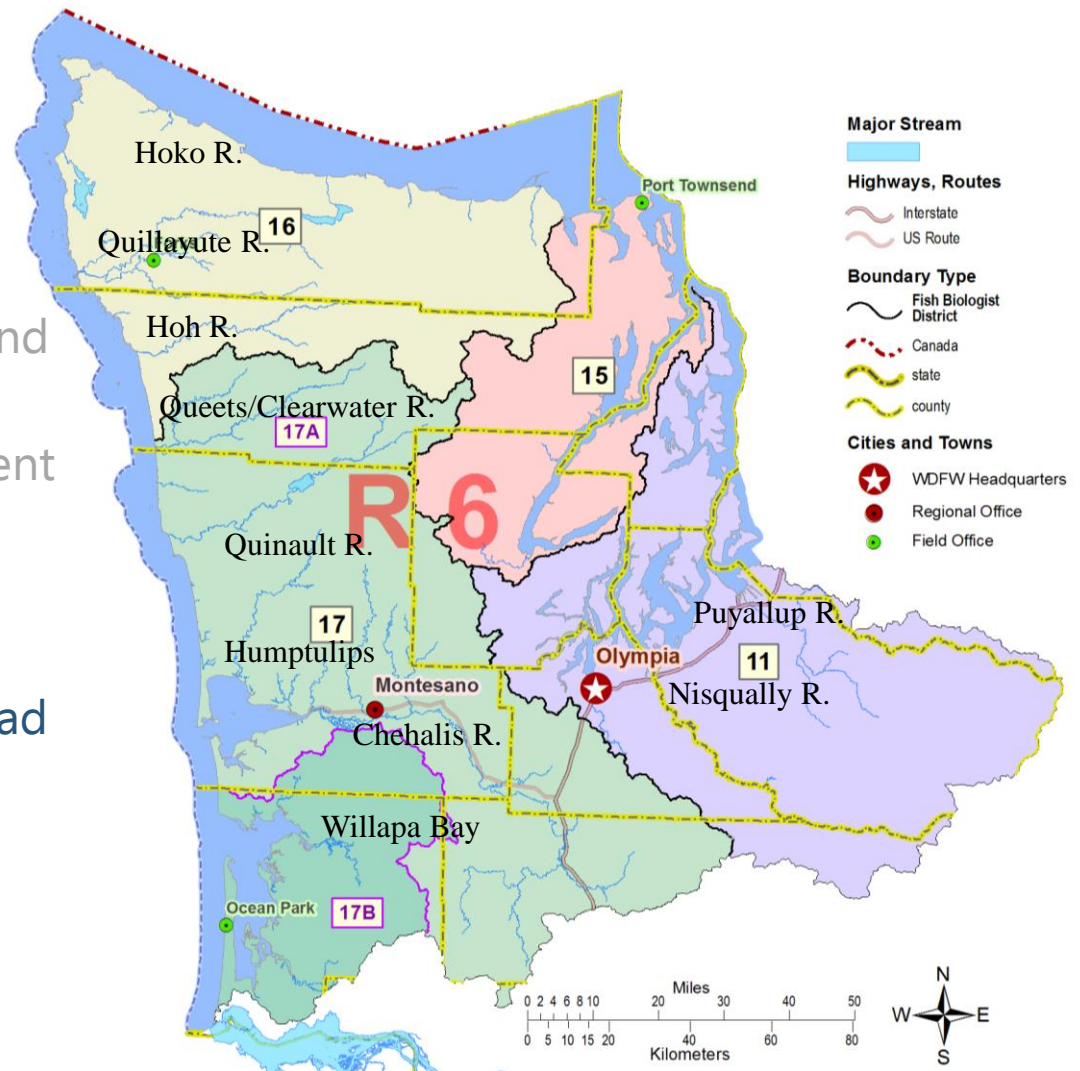
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Review of 2020-21 Winter Steelhead Season

Regulation Options for 2021-22



Review of 2020-21

- **February 2020**-Closure of Chehalis and Willapa Bay.
- **February and March 2020**-Meetings with fishing industry, advisory groups and others.
- **November 2020**- Public Town Hall Meeting.
- **December 2020**-Meetings with fishing industry, advisory groups and others.
- **December 11**- Commission Meeting
- **December 14, 2020**-Rule Change and Co-manager Agreements.
- **March 8, 2021**-Early Closure.

Changes to the coastal steelhead season



The Washington Department of Fish and Wildlife Dec 8, 2020 · 10 min read



Note: This information has been updated as of March 3, 2021, to reflect a March 8 closure to the coastal steelhead season.

Amid low returns, today we announced a March 8 closure to sportfishing in the Queets, Quinault, Humptulips and Chehalis river systems as well as tributaries of Willapa Bay to further protect wild steelhead

populations.

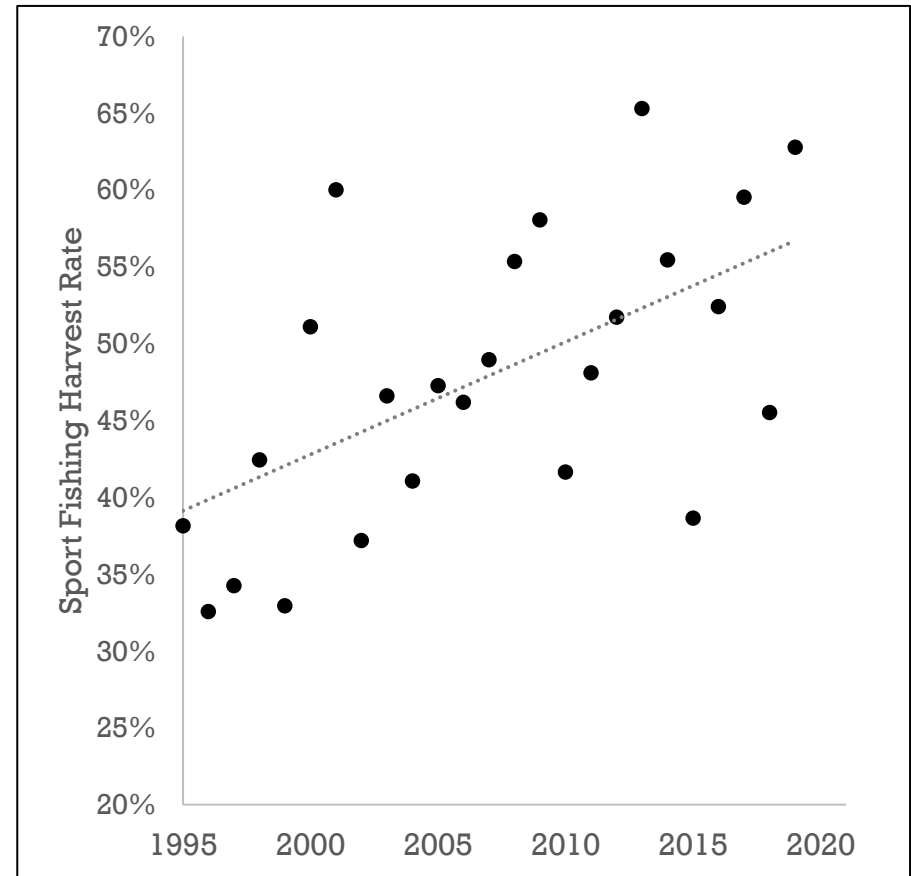
This follows measures we implemented earlier this winter to modify the coastal steelhead season, restricting fishing from a boat and using bait, to help more wild steelhead safely return to the spawning grounds. The Quillayute and Hoh rivers remain open for coastal steelhead through March 31 under these previously adopted conservation regulations.

We recognize that this is really discouraging news for the angling and



Review of 2020-21: Status Quo

- Declining abundance trends in majority of coastal rivers.
- Forecasts below escapement goals in majority of coastal rivers.
- **Chehalis and Humptulips**: Failure to meet escapement goal in at least 3 of last 4 years and exceedance of 10% ER in two of the last 3 years.
- **Willapa Bay**: Failure to meet escapement goal in last 5 years. ER <10%
- **Queets**: Failure to meet escapement goal and exceedance of 10% ER in last 3 years.
- **Hoko**: Failure to meet escapement goal in 2 of last 4 years. No estimate of ER.

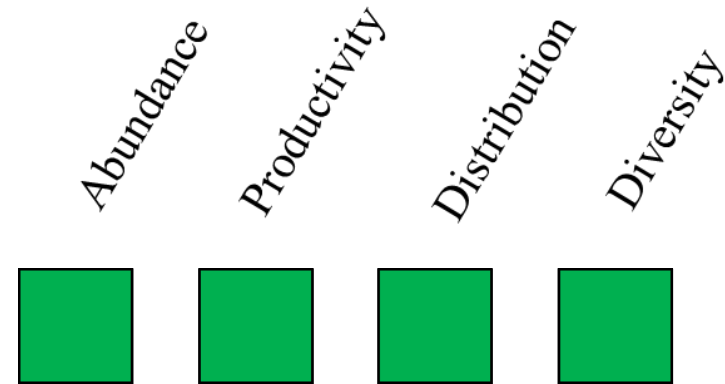


<https://wdfw.wa.gov/fishing/management/hatcheries/escapement>
https://wdfw.wa.gov/publications?title=&term_node_tid_depth=26269&author=



Review of 2020-21: Potential Options

Option #1: Early Closure



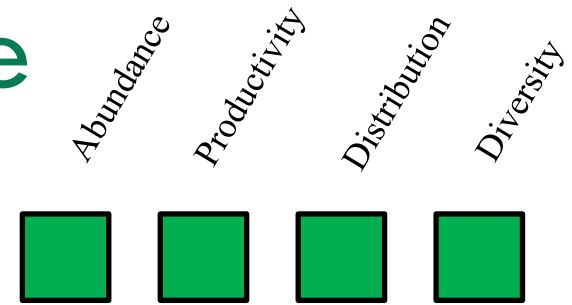
Option #2: Quillayute River Only

Option #3: Gear and Harvest Restrictions

Option #4: Coastwide Closure



Review of 2020-21: Rule Change



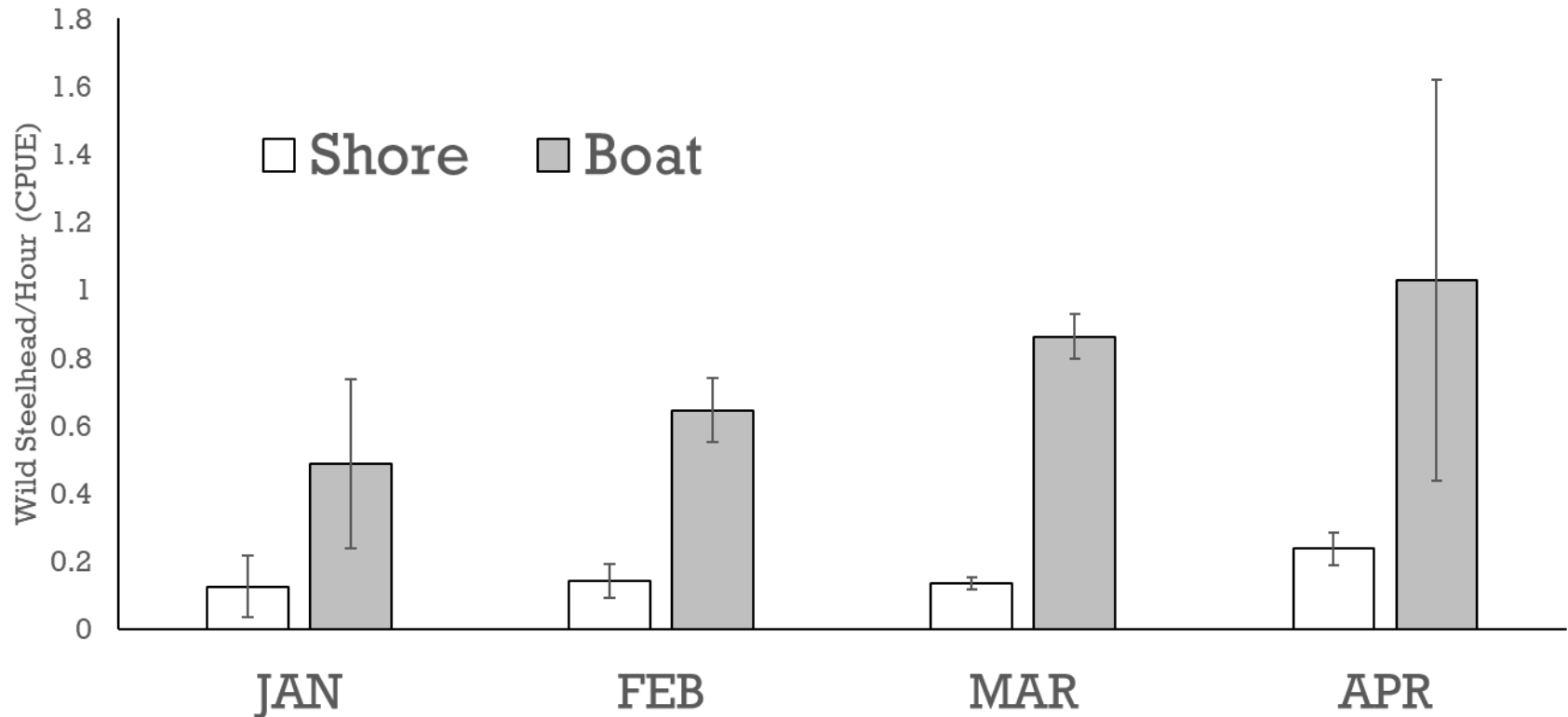
Description: Single point barbless hooks and Selective Gear rules (no bait), prohibit fishing from a floating device, April 1 closure date, release rainbow trout.

- Greatest likelihood of meeting management objectives outside of full closure.
- Support from public
- Maximizes Opportunity
- Provides greatest "protection" for late-timed hatchery programs.
- Preferred by tribal comanagers over a full closure of state fishery.



Review of 2020-21: No Fishing From a Floating Device

Hoh River, 2018 - 2020



Bentley et al. 2017

<https://wdfw.wa.gov/fishing/reports/creel/steelhead>



Review of 2020-21: Rule Change

At A Fork In The River: The Future Of Westside Steelhead,

Bank Fishing Only On Washington Coast Steelhead

OUTDOORS: Steelheaders left bank-bound and baitless

Changes to the coastal steelhead season

The Washington Department of Fish and Wildlife | Dec 8, 2020 | 10 min read



Note: This information has been updated as of March 3, 2021, to reflect a March 8 closure to the coastal steelhead season.

Amid low returns, today we announced a March 8 closure to sportfishing in the Queets, Quinalt, Humpulps and Chehalis river systems as well as

STEELHEAD ON THE BRINK

THE WEST END OF THE OLYMPIC PENINSULA IS A WILD PLACE, HOME TO THE NATION'S ONLY TEMPERATE RAINFORESTS AND STEEP MOUNTAINS RISING SHARPLY FROM THE PACIFIC COAST. IT'S LACED WITH A VAST NETWORK OF WATERSHEDS FED BY GLACIERS AND NEARLY INEXHAUSTIBLE RAIN. THE RIVERS ARE DYNAMIC AND POWERFUL AND DELIVER SHIFTY BIODIVERSITY. THEY CAN SWELL TO MAJESTIC VOLUMES, OFTEN CARVING NEW CHANNELS AFTER LARGE STORMS EACH YEAR, AND MOVING DOWN FALLEN TREES AROUND WITH CARE. THEY ARE INCREDIBLE WATERHEADS, AND THE LARGE, BRANNY STEELHEAD THAT ENVELOPE WITH THESE VOLATILE RIVERS ARE EQUALLY ASTONISHING.

NEW CONSERVATION RULES FOR THE OLYMPIC PENINSULA

As a youth led by a steelhead-obsessed uncle, it was on the Olympic Peninsula that I became a steelhead angler. I still fish these rivers today, though not as much as I once did. Today if I'm on the coast, it's often to fish with my son, a young man fishing hard for these elusive fish just as the opportunity to chase them took finally slipping away. The Olympic Peninsula has been a hotbed for steelhead for decades, and it's a shame that the steelhead population in the region is declining. The steelhead population in the region is declining, and it's a shame that the steelhead population in the region is declining.

Last Chance to Get It Right

Gregory Fitz

Rule changes and the future of the Olympic Peninsula's wild steelhead.



Warming ocean hammers outer coast steelhead

By JEFF CLEMENS For the Observer
Nov 30, 2020

Huge Audience Tunes In To Commission Hearing On WA

Come together to save steelhead

Sunday, March 7, 2021 1:30am | 10 min read



OUR STEELHEAD ARE in serious trouble.

For the Washington Department of Fish & Wildlife, this realization came in early December, with projections that, for the fourth straight year, steelhead on many rivers won't meet winter escapement goals.

That means not enough adults are returning home to spawn and sustain future generations of this incredible fish.



Department of Fish and Wildlife

Review of 2020-21: No Fishing From a Floating Device

Pros

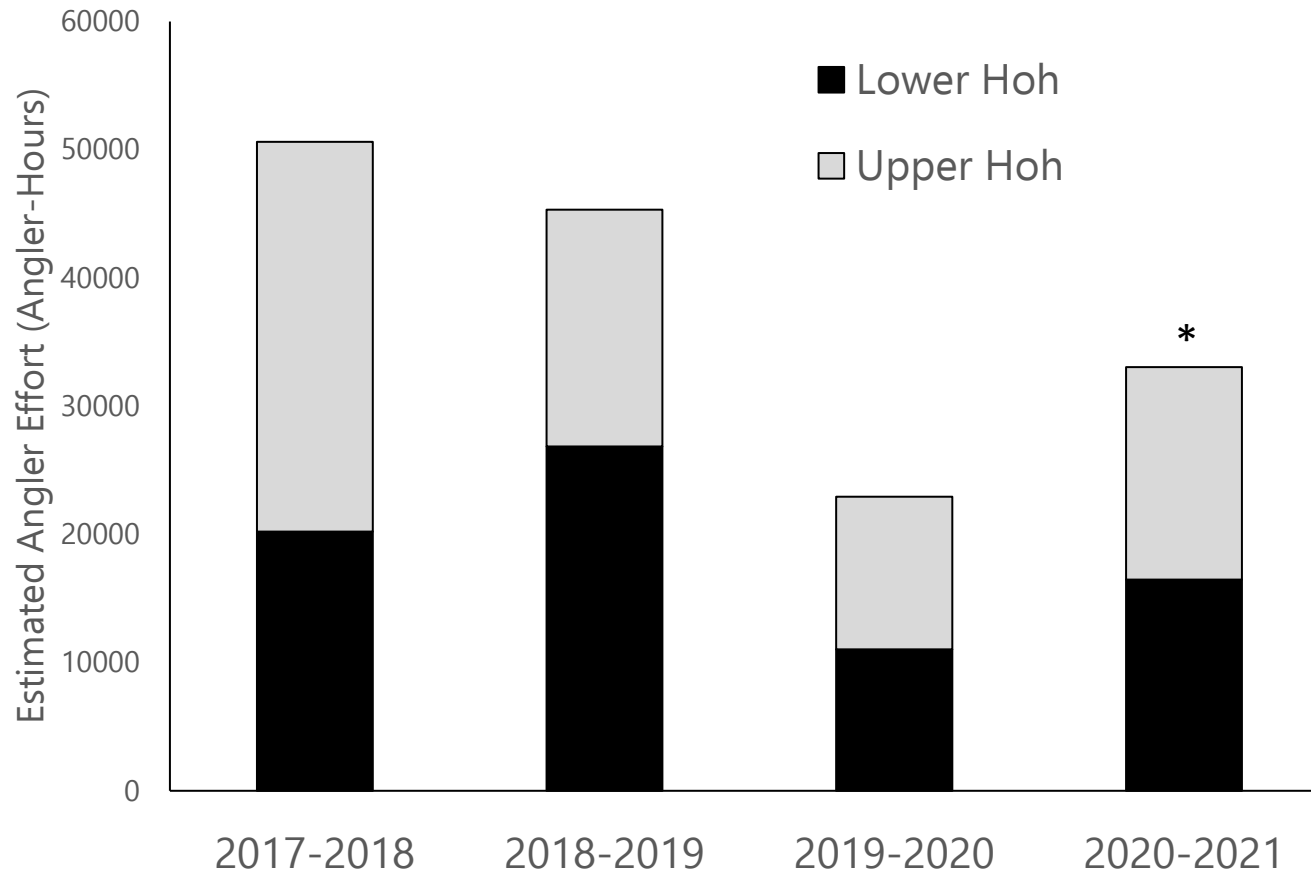
- Easy to Interpret
- Reduced encounters with wild steelhead
- Public support for opportunity in face conservation concerns
- Angler experience
- Safety

Cons

- Enforcement workload
- Imprecise in the level of reduction
- Dissatisfaction with limited methods, season length and user groups.
- Angler etiquette
- Safety



Review of 2020-21: Angler Effort

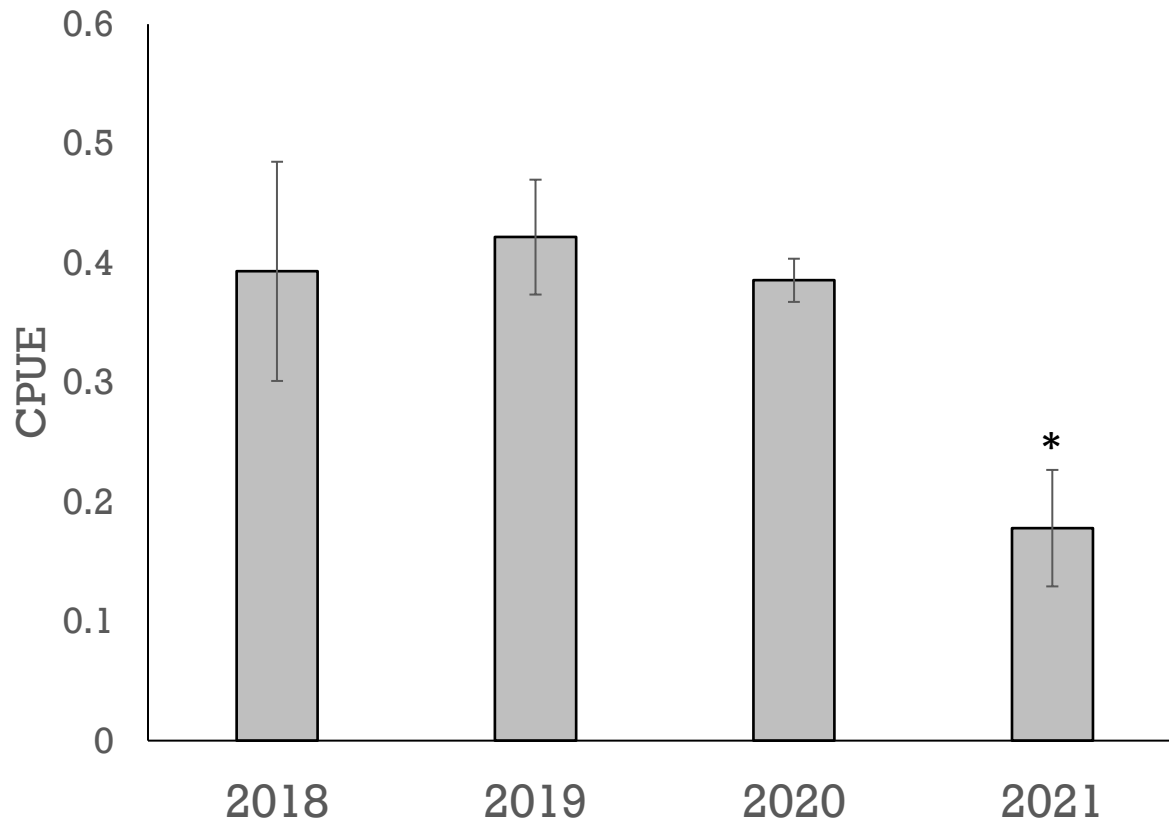


* Preliminary Estimate



Review of 2020-21: Catch per unit effort (CPUE)

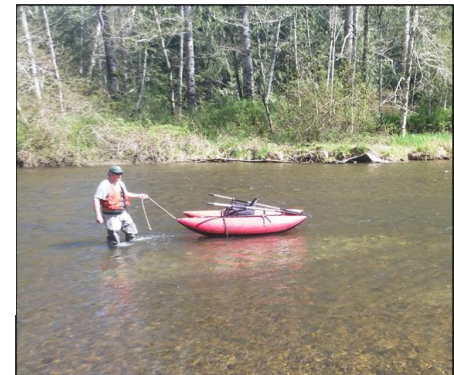
Hoh River 2018 – 2021 (Jan-March)



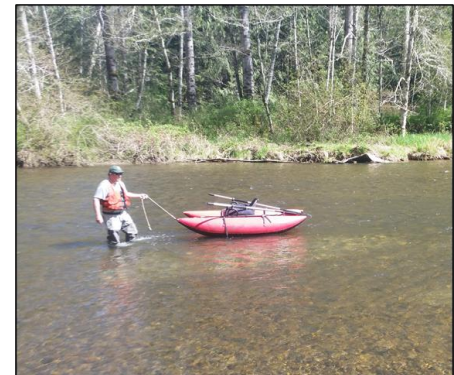
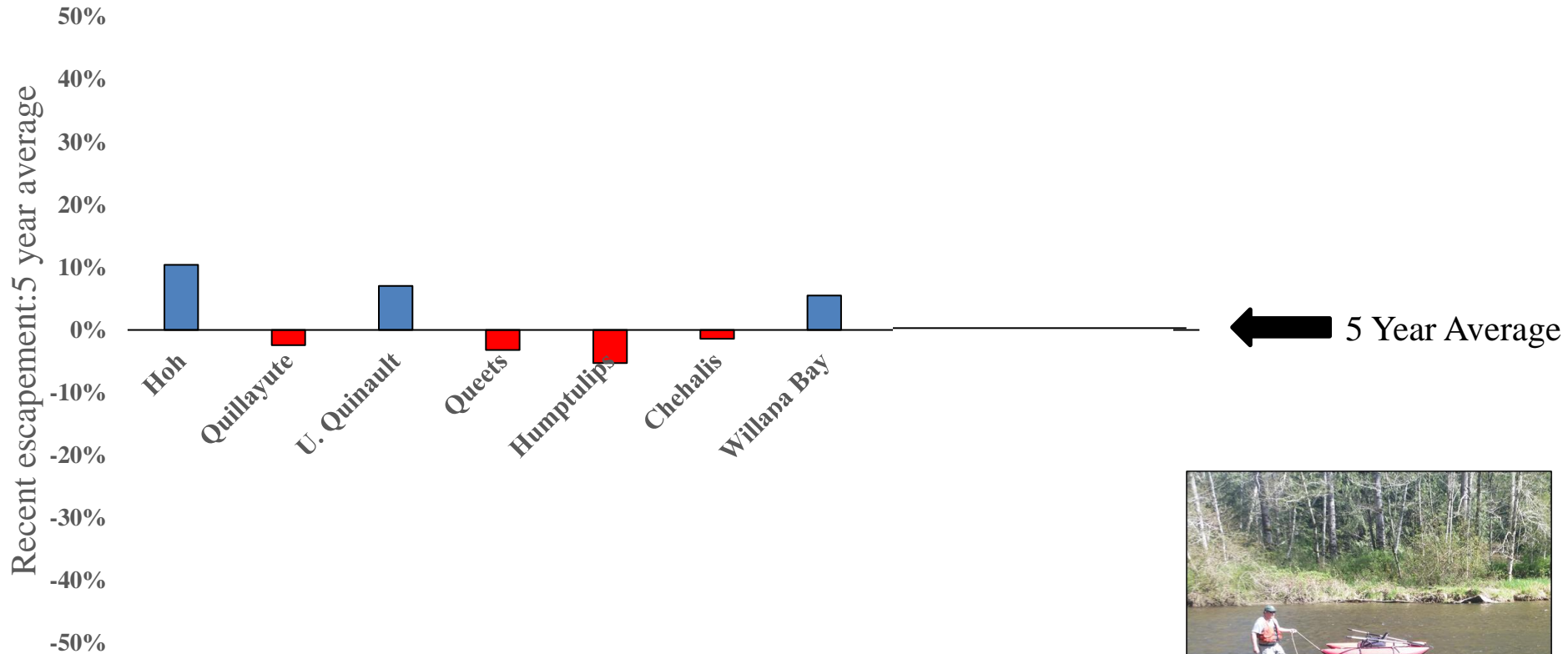
* Preliminary Estimate



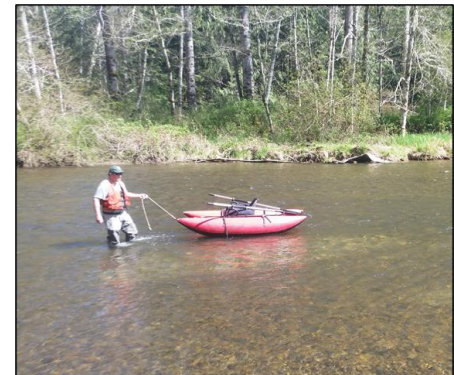
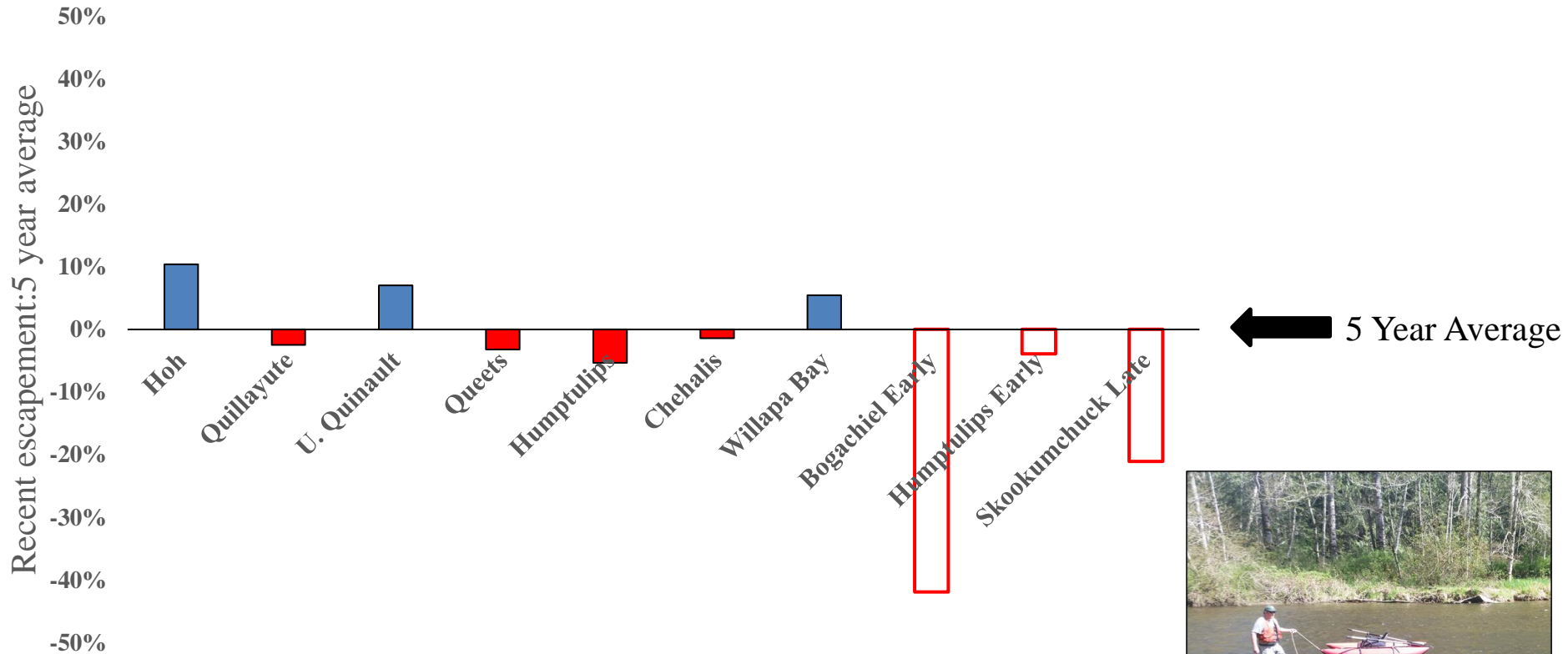
Review of 2020-21:Preliminary Escapement vs. 5 Year Average



Review of 2020-21:Preliminary Escapement vs. 5 Year Average



Review of 2020-21:Preliminary Escapement vs. 5 Year Average



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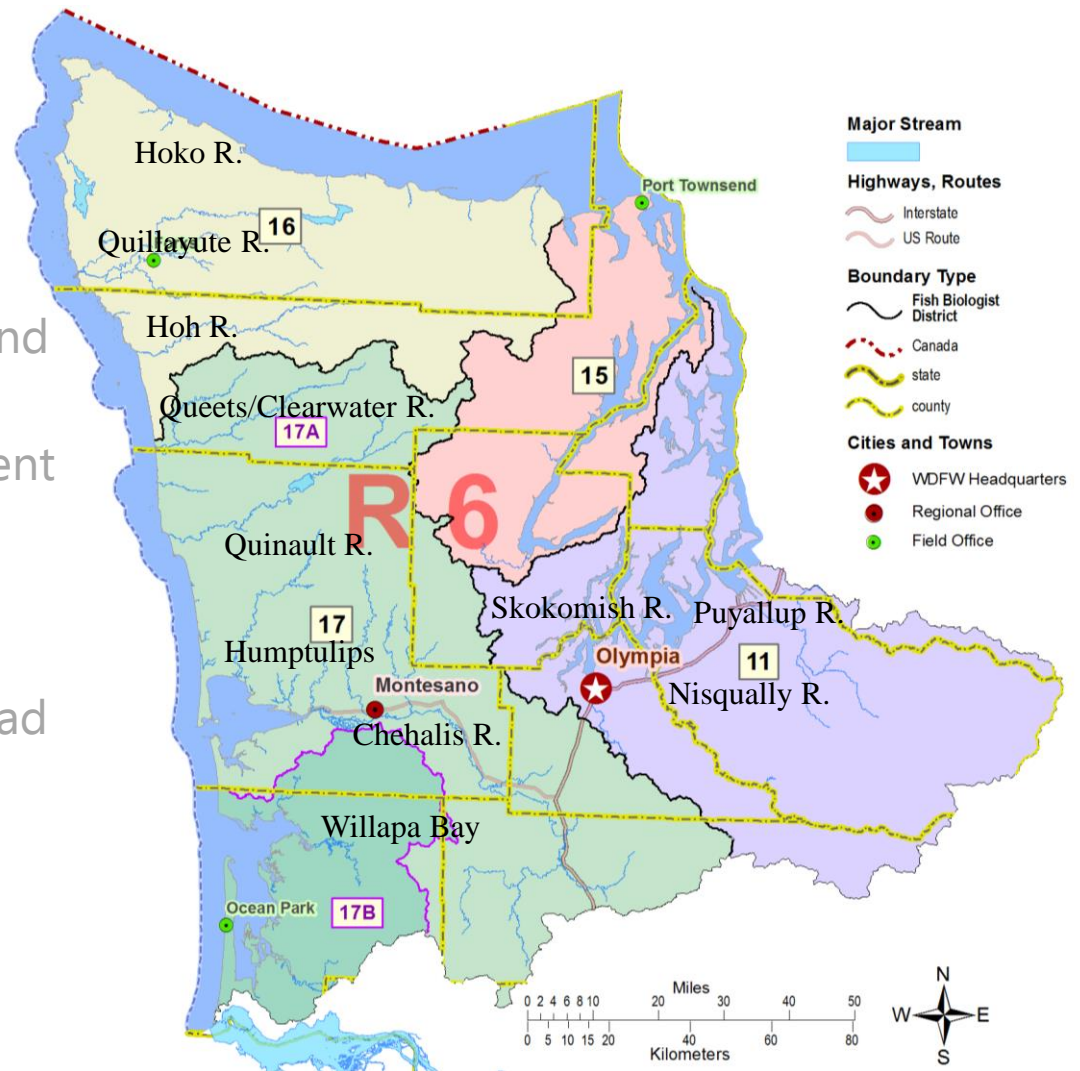
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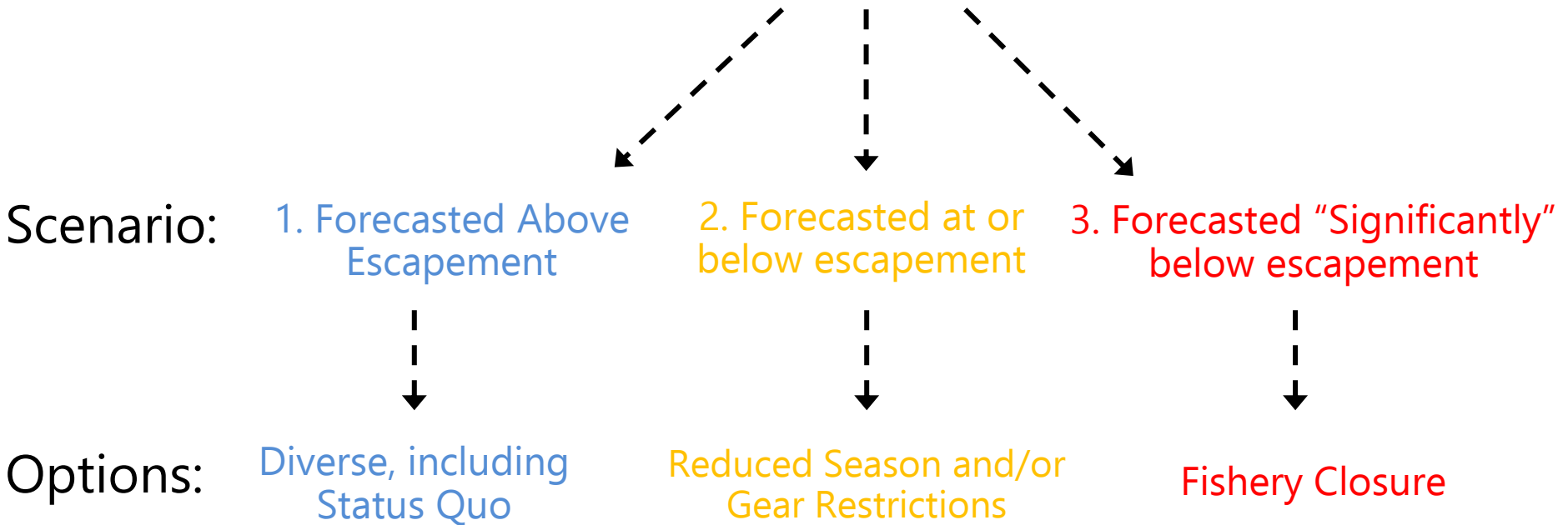


2021/22 Pre-season schedule

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River Specific Regulation Options



Specific Abundance Guidelines:

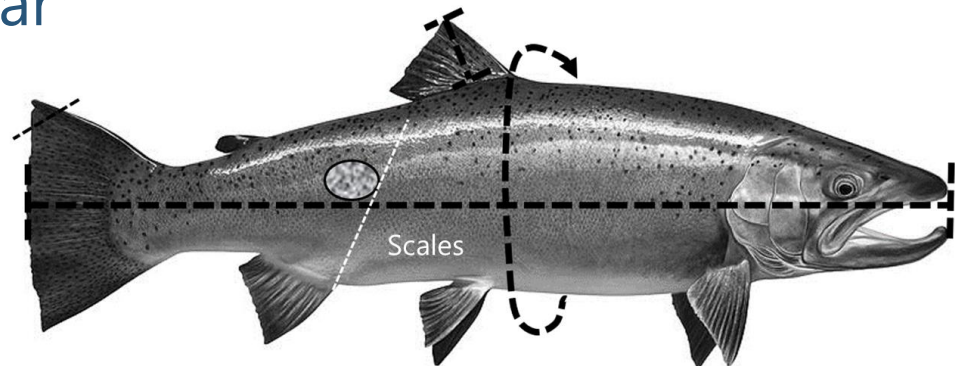
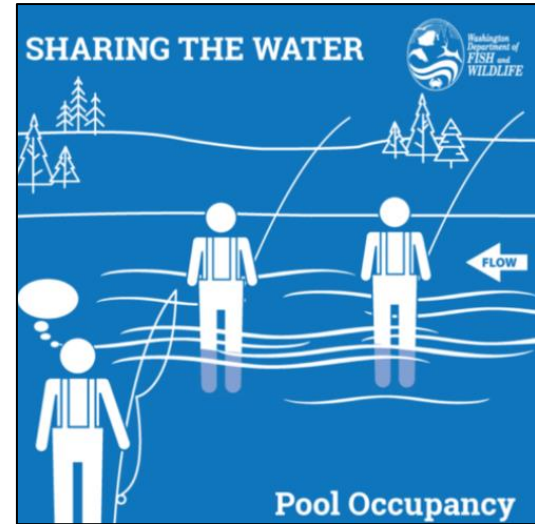
Runsize Greater than escapement goal: Assure escapement goals are met.

Runsize less than escapement goal: Minimize mortality to wildstock(s); in no case exceed a 10% impact from all fisheries.



Future Work

- Sport fish monitoring in areas in need of greater precision
- Strategic hatchery programs
- In-season indicators/triggers
- River specific fishery plans
- Angler Etiquette Tools
- Research focused on steelhead biology, gear types and diversity.



Questions? Feedback?

We're especially interested in

- Questions on the data and strategies presented by WDFW staff

ZOOM Reminders:

- You can type a question through the Q&A function or ask a question by "raising your hand." If you're calling in you can raise a hand by dialing *9 on your phone, or if your calling from a computer you can find the hand icon at the bottom of your screen.
- To speak you will need to unmute yourself by using the mute button on your computer or mobile device, or enter *6 if you're calling from a land line.
- If you have a technical issue during the webinar, please drop us a note in the Q&A and we will help you through it.
- Questions in written format are accepted an online portal a: wdfw.wa.gov/coastal-steelhead

